

American Aviation

25c

The News Magazine of Air Transportation

Feb. 1, 1948

A Provocative Report

AS A SHOCKER to waken Congress and the public to the grim realities of air power in a troubled world, the report of the President's Air Policy Commission was an outstanding achievement. It is a major contribution to the history of American military aviation and the national defense.

As a blueprint for civil aviation, the report was inconclusive and somewhat evasive. This should be no particular surprise, however, for the origin of the Finletter group was deeply rooted in military aviation and the plight of the aircraft manufacturing industry. It was not in the cards that the attention devoted to civil aviation should have been more than exploratory.

On March 1 the Congressional Air Policy Board will make its report and there is every indication that the findings of this group will be every bit as dynamic and potent as the report just presented to the President. It will be surprising if, following these two high-powered documents on a national aviation policy, constructive results aren't forthcoming.

One can only say "Superbly done" to the military and manufacturing sections of the Finletter report. Out of the many observations and comments one might make about the civil aviation and government organization sections, there are three subjects which strike us as being pertinent:

1. The Finletter report recommends the creation of a new agency within the Department of Commerce to be called the Aircraft Development Corporation for the purpose of providing all or part of the funds necessary to develop and build new commercial airplanes and affiliated items. The board has put its fingers on one of the most critical situations in aviation, but we're not certain that its recommendation for a government corporation is the wise answer.

Manufacturers generally are opposed to any such development agency, fearing, quite rightly, a trend toward nationalization and a freezing of designs and construction. Then, too, the Finletter group failed to answer one of the toughest of all problems, which is who is to make the decision as to what type of airplane is to be financed. Military and commercial experts have tried without avail to reach agreement on an all-purpose cargo plane. We're not sure that

(Turn to Page 6)



EAL Maintenance Superintendent

John C. Ray, recently appointed general superintendent of maintenance for Eastern Air Lines, is recognized throughout the air transport industry as one of its leading aircraft engine experts. With the company for more than 22 years, Ray is EAL's oldest employee in point of service. He joined the predecessor company, Pitcairn Aviation, Inc., in 1925, after 11 years with Curtiss Aeroplane and Motor Company.

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'White Elephants' 13

CIRCULATION COPY 2

MANAGEMENT

SALES

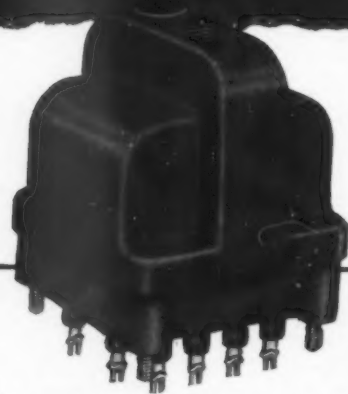
OPERATIONS



FROM arctic to tropic conditions within a matter of minutes is an everyday occurrence for many aircraft. Ordinarily, a result of such sharp, sudden changes would be rapid deterioration of the transformers in a plane's electronic equipment. But here, Honeywell Creative Engineering anticipated the need for special protection—and developed the answer.

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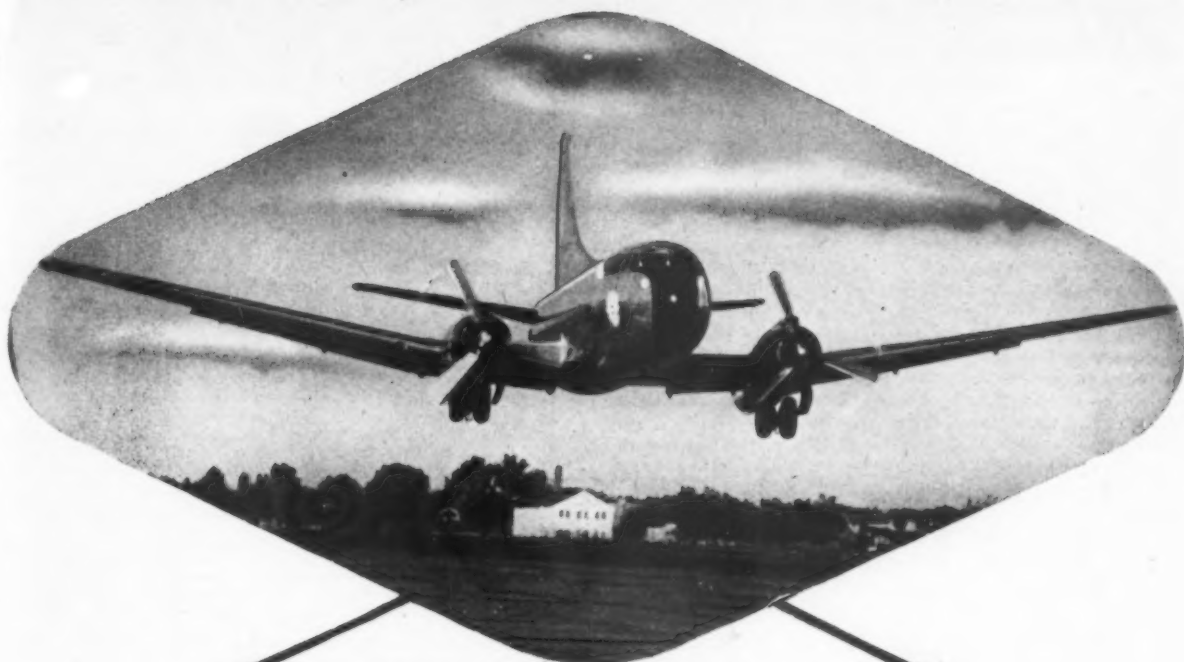


In a Laboratory "Jungle"...

Honeywell Creative Engineering developed this transformer housing that effectively resists dirt, dust infiltration and damaging moisture condensation.



Makers of the Famous M-H Electronic Autopilot
Standard on all AAF 4-Engined Bombers



ANOTHER REASON

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Goodyear aviation tire being subjected to test on giant dynamometer.

MORE AIRCRAFT LAND ON GOODYEAR

TIRES THAN ON ANY OTHER KIND

FORTNIGHTLY REVIEW

The important consolidated services experiment at Willow Run, which has been far from satisfactory in some respects, is undergoing a shake-up, following recommendations made by a special airline committee headed by Milton W. Arnold, v. p.-operations and engineering of the Air Transport Association. (Page 11)

Proper planning is essential to prevent large city airports from becoming "white elephants" for taxpayers. Problems of air traffic control place definite limitations on optimum sizes of landing fields. (Page 13)

Post Office Department is at work on a number of projects, including a network of aerial Star Routes, for getting more mail into the air and for keeping the postage rate down. This should ultimately mean more revenue for the airlines. (Page 15)

Daily plane utilization of the domestic airlines declined 16% in 1947 from the previous year. Last year the average transport was in the air 7 hours, 48 minutes daily, compared with 9:21 in 1946. (Page 24)

The higher fares now in effect should bring the domestic airlines over \$30 million more in passenger revenues this year, even if traffic volume remains the same as in 1947. Cargo revenues should also be up considerably. (Page 32)

For the past six months, penny postcards have been effectively selling air transportation for Capital Airlines. (Page 33)

Early ATC-NATS Merger Expected

A plan worked out by the Air Force and Navy for merger of the Air Transport Command and Naval Air Transport Service went to Secretary of Defense James Forrestal early last week, and machinery to accomplish the consolidation will soon be in motion. Rear Adm. J. W. Reeves, Jr., NATS chief, is expected to head the combined operation to be known as Armed Forces Air Transport Service (AFATS). While resigned to the fact that there will be a consolidation, certain NATS officers are still strong in their objections, claiming that the advantages have been greatly exaggerated, and that AF's prime interest is in control rather than consolidation. It was learned that NATS has quietly re-established its trans-Atlantic service, an operation that was terminated in late 1945. Navy officers claim that following termination, ATC had agreed to lift 35,000 pounds a month for support of naval forces in Europe, but that this ATC service was "neither adequate, dependable nor in the places required."

To Fight Curtailment of G. I. Aviation Training

Regional meetings of the United Pilots & Mechanics Association are being set up to prepare concerted action against proposed changes in policy and reduction of funds for G. I. aviation training. James Batchelor, general counsel of UPMA, has asked aircraft operators, educational institutions, veterans groups, airport commissions, and other interested parties to join the fight for continuance of the present program. Basis for concern over G. I. aviation training is President Truman's request in his budget message to wipe out "avocational and leisure-time" courses, which has been interpreted as striking at flying lessons taken by some ex-servicemen as extra curricular courses.

Aviation in the Legislative Hopper:

Parcel post would be carried by air between large metropolitan centers on a contract bid basis under H.R.

AMERICAN AVIATION

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FORTNIGHTLY REVIEW

(CONTINUED FROM PAGE 4)

5090 introduced by Rep. Edward H. Rees (R., Kan.), chairman of the House Post Office Committee. Rates prescribed generally would be those existing for parcel post, plus a figure up to 25c a ton mile. Low bidder—either certificated or non-certificated carrier—would be awarded contract by Postmaster General after CAB certified fitness, willingness and ability of the carrier.

Legislation to carry out recommendations of the President's Air Policy Commission and to spend \$4,000,000,000 to "regain" air supremacy for the U. S. was introduced by Sen. Edwin C. Johnson (D., Colo.). His S. 2009 calls for spending \$2 billion over current spending levels in each of 1949 and 1950 fiscal years. The Commission itself had proposed boosting expenditures by \$1.3 billion in each of the calendar years 1948 and 1949.

The Jan. 21 accident involving an Eastern Air Lines Constellation at Logan International Airport, Boston, would be investigated by the House Interstate and Foreign Commerce Committee, if H.R. 446, introduced by Rep. Thomas J. Lane (D., Mass.), is adopted. The plane skidded on an icy runway, turned over and burned. No passengers were killed, but six seriously injured. Lane based his proposed investigation on alleged statement by the pilot that he was not familiar with "the weather in the Boston area."

H.R. 5008 to boost the air mail rate to 6c was introduced by Rep. Robert J. Twyman (R., Ill.), who claimed that the cut to 5c failed to produce the increased volume predicted and that the air mail deficit had increased.

Names in the News:

Both Arthur Boreman, president, and Lowell Swenson, general manager, of National Aeronautic Association, are continuing in their positions until Mar. 1. Successors have not yet been named . . . Asserting that the U. S. should have an Air Force clearly superior to any other country, Sen. Robert A. Taft (R., Ohio), recently told the Rhode Island Republican club that he preferred expanding the air arm to establishing compulsory military training, because such a move "is less expensive and 10 times as important" . . . Grover Loening, pioneer aviation engineer and consultant, has been awarded the Legion of Merit in recognition of work as wartime aircraft adviser to WPB and special consultant to military services and NACA . . . James H. Doolittle, v.p. and a director of Shell Union Oil Corp., has been elected an honorary fellow of the Institute of the Aeronautical Sciences. Doolittle, a fellow and past president of the Institute, received the fellowship at the annual Honors Night Dinner in New York, Jan. 26 . . . Col. Lester J. Maitland, who first gained fame for a tri-motor Fokker C-2 flight from Oakland to Honolulu in 1927, becomes director of the Wisconsin State Aeronautics Commission, Feb. 1, at salary of \$5,000 . . . Vice Admiral John D. Price, commander of the Pacific Fleet air wing, has been ordered to Washington to become deputy chief of naval operations for air.

Notes in the News:

Navy's 92-ton Lockheed Constitution on Jan. 16 started final phase of test flights, flying for the first time with full power of four new 3,500 hp Pratt & Whitney Wasp Major 4360 engines. Useful load for flight was 76,000 pounds, including fuel, test equipment, and 20,000 pounds of water ballast. The craft made 50 flights in 1947, logged more than 100 hours, covered more than 20,000 miles . . . Strategic Air Command is undertaking a project to service test facilities needed to maintain all-weather flying with fighter aircraft, including jets. P-51 pilots of the 4th Fighter Group, Andrews Field,

Md., are carrying out trials before training can become command-wide . . . Membership on Air Coordinating Committee formerly exercised by War Dept. has been transferred to the Air Force . . . Helicopter Engineering Research Corp., Boulevard Airport, Phila., has successfully flown its new JOV-3 tandem helicopter. Price of \$7000-\$9000 is estimated for the craft, powered by a Lycoming 0-235 four-cylinder 100 hp engine, when in moderate production . . . Navy has under consideration a proposal by Chance Vought Aircraft Division, United Aircraft Corp., to move operations from Stratford, Conn., to Grand Prairie, Tex., near Dallas, into what was known during the war as North American Aviation "B" plant. Navy owns all facilities at that location. Chance Vought will soon complete work on the F4U5, last of the piston engine project for Navy, and turn to the F4U6 jet fighter; runways and test facilities, weather and terrain at Grand Prairie are much more desirable for development of the jet fighter than those at Stratford.

International

BOAC to Keep U. S. Planes on Atlantic Runs

The controversial four-engined Avro Tudor I will be used by British Overseas Airways Corp. on some of its Empire routes, if final tests prove successful, but it will not be operated across the Atlantic, the British government has decided. This means that BOAC will fly the Atlantic for some time yet with U. S. equipment—present Lockheed Constellations and Boeing Stratocruisers on order. Tudor I has been subject of much controversy, with Avro accusing BOAC of insisting on alterations to delay production—charges denied by BOAC. A special committee appointed by the government to study the situation cleared BOAC of the delay charges, and said the airline was justified in buying Constellations when it became evident the Tudor would be late.

Russian Tupolev 70 Copies B-29 Closely

Striking similarity between the Russian Tupolev 70 aircraft and the Boeing Superfortress has been reported from London. The mainplanes, fin, rudder (even to a small hinge shroud) are all very close reproductions. The engines also are U. S. copies, the typical Pratt & Whitney type of ignition screening is used, and propellers are patterned after Hamilton Standard. Only real difference noted by London observers is the center fuselage, which has been rebuilt to convert the plane into a passenger craft, although a bomber version is reported forming Russia's principal heavy bomber project.

Civil Air Assistance for Latin America

Cooperative agreements have been made with Colombia, Ecuador, and Bolivia for U. S. civil aviation technical assistance missions, as result of a CAA-sponsored survey through 10 countries. The missions will serve in advisory capacity for periods of approximately six months to a year on specialized problems, with objective of standardizing equipment and procedures. Negotiations for similar agreements with Uruguay, Chile and Venezuela are in advanced stages.

BSAA Gets Jamaica-Miami Permit

British South American Airways has received from CAB a foreign air carrier permit for service between Jamaica, B. W. I., and Miami, Fla., via Nassau, Bahama Islands, and Bermuda. BSAA proposes to operate three round-trips weekly, using Avro Yorks modified for 32 passengers and crew of four.

EDITORIAL

(CONTINUED FROM PAGE 1)

an Aircraft Development Corporation is the proper agency for determining the answers to such major problems. Yet the Finletter group is to be commended for striving for a solution. There will be no more commercial airplanes built by manufacturers for a long time without developmental assistance.

2. The Finletter report recommended the removal of all responsibility for safety matters and accident investigation from the Civil Aeronautics Board. A wise recommendation. It has been apparent for a long time, and should have been apparent to the drafters of the Civil Aeronautics Act, that one man cannot be both an expert on technical safety matters and on economic problems of air mail pay, route certificates and the like. The CAB has been unduly burdened by matters on which it is not qualified to act. It should be left only with economic matters.

Whether there should be a revived independent air safety board is a moot point. The Finletter group thinks so. There is much to be said on both sides of the controversy. Certainly it would seem strange to place the investigation phase of safety within the same agency (the CAA) that enforces the regulation, but there are a number of ways by which safety can be handled within the framework of the CAA or the Department of Commerce. Taking safety out of the CAB would be a forward step.

3. It was evident from the report that the Finletter board was impressed by the arguments put forth for greater concentration of authority over aviation by the Department of Commerce. We cannot be quite so enthusiastic and so positive as the Finletter board in this respect.

Congress created the Civil Aeronautics Authority as an independent agency in 1938. The Authority was a creature of Congress and reported only to Congress. Several years later President Roosevelt by an executive order destroyed the independence and placed the whole agency within the framework of the Department of Commerce, a cabinet agency responsible to the President. We have always felt that this quick reorganization was a mistake. What is often overlooked is that the transfer was not made with any long-range efficient plan in mind, but merely to settle the bitter feud between the late Harry Hopkins, then Secretary of Commerce, and other New Deal satellites, who were trying to keep their fingers in civil aviation. Thus aviation came into the Commerce Department more through accident and indirection than by any other manner.

It is natural that the current Secretary of Commerce, finding the CAA in his backyard and presuming it to be there for a predetermined purpose, wants to make something out of his various responsibilities. It is natural, too, that he thinks he should have something to say about what goes on in the CAB for, after all, it is within his Department.

We say it is natural for the Secretary of Commerce to want these controls, but we can only warn that if the independence of the CAB is ever broken down, commercial aviation is in for another political struggle and blow-up of the type that happened in 1934. An independent Civil Aeronautics Authority is preferential, but if civil aviation is to remain under the protective umbrella of the Department of

Commerce, let Commerce move with caution to keep politics out of the CAB and to exercise as little political influence over CAA as is possible in a cabinet agency.

In Transit

AS OUR last issue was going to press the President named Major General Laurence S. Kuter for the chairmanship of the Civil Aeronautics Board. The White House plans hit a snag a few days later when Senate and House committees of Congress refused to report out favorably legislation necessary for General Kuter to take the post without losing his status and pay in the Army. Better handling of the situation by Mr. Truman might well have avoided the snag, although the feeling against military men holding down high civilian government posts has been growing stronger in Congress. We feel that General Kuter would have made an excellent chairman and that he is not in the class of an old-line military man. But the Kuter appointment is now a transitory bit of history and the CAB chairmanship was still unfilled at press time.

Reason Can Prevail

THE THREATENED strike of pilots on United Air Lines is now in the past tense and agreement reached on a new contract. Everybody should be very glad, for a strike at this time would have been disastrous. That a settlement was reached is ample evidence in itself that virtually all issues can be resolved by give and take if both sides earnestly desire to avoid costly trouble. We thought there was no issue at stake justifying a drastic result such as a strike and that only action by a minority type of low unionism, beneath the dignity of professional pilots, could bring it about. The ALPA master council and the United management are to be commended for avoiding an action which would have brought great injury to company and industry at this time.

A Good Man Resigns

NOT EVERY man who takes a high government post really "sacrifices" when he comes to Washington. More than one high-touted official simply didn't have another place to hang his hat despite the impressions he gives out to newspaper columnists. But there are numerous other officials who really sacrifice far greater earning power in order to accept a top government job because of a sincere desire to contribute to the public good.

T. P. Wright is one of the latter. Being Civil Aeronautics Administrator has cost him a substantial sum from his private savings. He has performed his duties faithfully and, in the opinion of a majority, has done the best job to date as Administrator. He has resigned to accept an excellent research and administrative post with a salary commensurate with his value. We cannot blame him for his urgent desire to accept a position that will pay his bills. High-class citizens cannot be prevailed on to work for the government at current salary levels. He will be difficult to replace in the CAA.

WAYNE W. PARRISH
AMERICAN AVIATION



Might



Right

AN AIRPLANE has no morals. It cannot distinguish between good and evil. Its role in world society and its contributions to our civilization depend entirely upon how it is used by *people*.

Will men learn to think in terms of air for the *good* of humanity? Can they devise and apply methods of utilizing air transportation for peaceful pursuits with the same vigor and determination with which they speeded the development of global aviation in time of war?

The answers to these questions depend greatly upon the people who are connected with aviation. It is their responsibility — in their own interest as well as in the interest of our nation — to lead the way in creating a public attitude of mind compatible with air progress. And their opportunity is equal to their responsibility.

The potentialities of air transportation are limitless. It is still in the pioneering stage — and a courageous pioneering spirit must remain alive in those who guide its destiny.

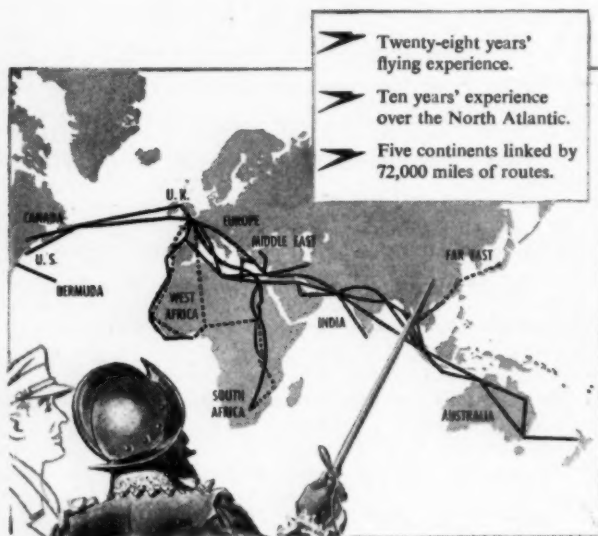
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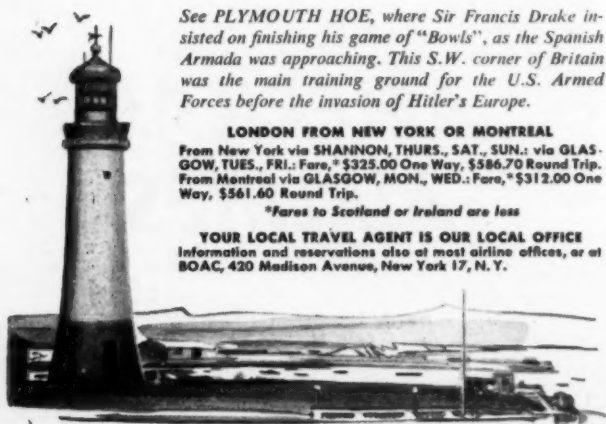
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See **PLYMOUTH HOE**, where Sir Francis Drake insisted on finishing his game of "Bowls", as the Spanish Armada was approaching. This S.W. corner of Britain was the main training ground for the U.S. Armed Forces before the invasion of Hitler's Europe.

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BACKGROUND & TRENDS

Decisions on Schedule: While CAB members concur in recommendation of President's Air Policy Commission that decisions in new route certification cases be deferred "for a short time," pending cases that have been in the mill are expected to be decided on routine schedule. Several new route cases have been in motion for a long time and are near the decisive stage. These will not be held up. But CAB is likely to take seriously the recommendation that there is a breathing spell in the future.

CAB Workload: To show Congress how its workload has been soaring in recent years, CAB in its annual report developed an index, based on 100 for 1941, which registered 310 in fiscal '47, and is estimated to reach 378 in current fiscal year. CAB employment index of 100 for 1941 rose to 147 in '47, will reach 180 in fiscal '48. Board estimates it will be more than two years behind in its work by July.

72,000 Jobs: Prediction that 72,000 new aircraft jobs would be provided if Congress goes along with recommendations of the President's Air Policy Commission has been made by the International Association of Machinists.

Air Safety: Reduction of 75% in air accidents, after installation of radar-type altimeters and adaptations of wartime radar are completed this year, is predicted by John K. Northrop, president of Northrop Aircraft. Air transportation on an overall basis will then become the safest form of human transportation by a considerable margin, he believes.

More 2-O-2's: Glenn L. Martin in recent Senate Banking Committee hearings on RFC disclosed that Northwest Airlines has contracted for three more 2-O-2's. NWA is negotiating for an additional 12, which would give the airline a total of 25. Martin is turning out 2-O-2's only to meet specific orders, meanwhile switching production emphasis to the AM-1 "Mauler" for Navy.

Cargo Orders: Air Force circles report that both Douglas and Lockheed will be cut in on military transport orders, with 10 DC-6's (C-118) and 10 Constellations now definitely set to supplement the current order for 27 Boeing C-97's. Both models will be for cargo purposes. The 20 planes, with spares and modifications, will cost about \$32,000,000, the funds probably coming out of tactical allocations.

Agreement Reached: A special report of the Radio Technical Committee for Aeronautics, now in final stages of preparation, is expected to represent the first time that military and civil aviation leaders, as well as government regulatory groups, have reached general agreement on a system designed to serve air navigation for the next decade or so. A preliminary report submitted to the Congressional Aviation Policy Board recommends a \$35,000,000 appropriation for development work. This report should do much to remove past objections on Capitol Hill over duplication between systems proposed by military and civil aviation interests.

Nearly 13 Million: Revenue passengers carried by the domestic airlines in 1947 should total nearly 13 millions, and revenue passenger miles 6.1 billions, when final figures are in. Official reports by the scheduled lines through November show 11.9 million passengers and 5.6 billion passenger miles. December was an extremely spotty month, good for some, quite bad for others.

Best—But a Loss: This year's Miami All-American Air Maneuvers were acclaimed as the best yet. But not so financially. The sponsors are currently beating the bushes for \$20,000 to finish paying off. Future of the annual affairs is uncertain.

Applauded: Recent assignment of Maj. Gen. Kenneth B. Wolfe as director of procurement and industrial mobilization planning at Air Materiel headquarters, Wright Field, is widely acclaimed in manufacturing circles. General Wolfe is considered one of best executives in the Air Force.

Personal Planes: With 16,023 personal airplanes produced in 1947, less than half the total for 1946, estimates for 1948 range from 5,000, made privately by a leading insurance company, to 12,000, made by Aviation Market Newsletter. Best estimate in Washington is 10,000. But all agree it won't be a rosy year and that competition will be very energetic for the four-place market. No less than 11 4-place models will be available.

First With Convair: Continental Air Lines expects to be the first airline to place the Convair-Liner in regular scheduled service about April.

Airport Movies: A movie theater chain at major airports throughout the country is being planned by Airlines Terminal Theaters, recently incorporated in Detroit. The theaters will introduce Visu-Matic, a small screen next to the larger movie screen, to keep the audiences informed of arrivals, departures, and personal messages. Short subjects will be featured on the movie screen.

Cutting Corners: CAA Airway Traffic Control centers are collecting data on airline pilots prone to violate Civil Air Regulations by cutting corners on dog-leg routes. Elapsed time between reports from fixed reporting points is checked, and when there is considerable variance between actual elapsed time and schedule time, it is assumed that the pilot has left the airways to avoid traveling over the longer dog-leg route. Alleged violations are then turned over to CAA flight operations inspectors. CAA officials also report receiving complaints concerning some pilots who do not carefully follow the right-hand rule on the airways.

Czech Air Service: Czechoslovakia is planning to join the growing number of European countries offering airline service to the U. S. That country is expected to apply for necessary trans-Atlantic permit soon.

Feeder Agents: Hotels, insurance agencies, taxi and bus companies are considered by some feeder airline executives to be their best agents in downtown sections of cities. At least one feederline gives high priority to insurance agencies because of young, aggressive salesmen on insurance staffs.

C-46's for EAL: Negotiations are reported underway for conversion by Slick Airways of 10 C-46's for use as all-cargo planes by Eastern Air Lines. If the deal goes through, this will represent major move by Eastern to develop fast growing cargo business.

Training by Douglas: Officials of Douglas Aircraft Co. are considering establishment of an institute for training of airline maintenance personnel in repair and overhaul of new types of airline equipment. Ultimate decision on institute depends on airline support for such project. Airlines are being polled on subject.

How to travel 3,000 miles a week

...and like it!

by David N. Laux, Vice President
Sports Afield Magazine



"In Detroit recently," says Mr. Laux, "my business finished, I offered a friend a ride back to New York in Sports Afield's 4-place Bonanza. But he had other plans. I took off at 2:30 p.m. and reached my country club near New York at 6. Just to needle my friend, I phoned him in Detroit where he was *still waiting*—with a night's travel ahead!

"This is just one example of the speed and mobility our Bonanza gives our top men. Distance had kept us from making trips. Now Chicago and even the coast are near with this fast, comfortable plane. We're averaging better than 3,000 miles a week in it. Because it cuts the waste out of travel time, we do a week's work in two days!"

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Willow Run Plan Undergoes Shake-Up

Airlines' Consolidation Experiment Revamped Following Recommendations Made by Special Arnold Committee

By KEITH SAUNDERS

Operation of the consolidated services experiment at Willow Run Airport has been far from satisfactory in some respects, but six of the seven airlines participating in the consolidation have decided that actual economies already indicated and further potential economies and other benefits warrant continuation of the project.

This verdict was granted the Airlines National Terminal Service Corporation, which operates the airport for the carrier-controlled Airlines Terminal Corp., on the basis of a thorough study of the Willow Run operation made by a special airline committee headed by Milton W. Arnold, vice president—operations and engineering, of the Air Transport Association. This report has been circulated to all airlines concerned.

A new formula for pro-rating of expenses among the seven participating carriers calls for payment by each of a flat fee of \$2,500 per month, after which service fees will be charged on a use basis. This met with the approval of six airlines, including Capital, which had threatened to withdraw unless expenses were pro-rated on a more equitable basis. The seventh carrier, Chicago and Southern, which operates four schedules a day out of Willow Run, is still operating there but is leasing space and hiring services from ANTSCO instead of participating in the consolidated operation.

Idea Must Work

Although agreeing with the Arnold committee's belief that a worse location than Willow Run could not have been selected for such an experiment, the ATC held it to be imperative that the consolidated terminal services idea be made to work. It accepted the committee's recommendations, however, for an early slash of 68 ANTSCO personnel, a closer control of expenditures, the ultimate hiring of an operations manager, and the naming of a committee to redefine the entire activity of the terminal corporation and to review home office and overhead expenses of both the service and terminal corporations.

It refrained from censuring R. H. Callahan, general manager, whom it found to be "capable and efficient."

The Arnold committee sought to determine what changes could be made (a) to effect greater economies, and (b) to effect greater efficiency. It made some interesting discoveries, including the fact that several of the airlines taking part in the Willow Run experiment had no figures on the cost of using the consolidated services as compared with what it would cost them to provide the same services for themselves.

American Saving \$2,000

TWA, for example, stated it had no comparative costs on the Willow Run operation. Eastern said it had no studies but felt that considerable economies could be effected in the administrative costs of ANTSCO. C & S said it felt it was being charged excessive amounts for the service rendered, but admitted it had no studies or comparative figures as to costs.

American estimated it was saving approximately \$2,000 monthly and

said its operational division felt generally that the operation was improving and that the service rendered American at Willow Run was no worse and no better than that at stations manned by its own personnel.

United submitted a fairly detailed report in which it said that many features of the service were unsatisfactory but there was a trend toward general improvement and that the entire project should be re-evaluated at a later date. Its estimate of savings over a three-month period ranged from \$600 to \$2,000, and it said the trend of improvement was sufficient to warrant its continued participation.

Northwest said it had re-evaluated the costs at Willow Run and felt that the operation was costing the company no more and possibly was costing less than if the service were performed by Northwest.

Capital Airlines, on the other hand, submitted detailed studies purportedly showing that the consolidated services at Willow Run were costing the company \$5,000 to \$10,000 a month more than if it were performing the services itself. It contended, moreover, that the costs imposed upon Capital were being passed on as savings to the other carriers.

Uniformity Lacking

The committee said it had lacked sufficient time in which to make a complete accounting break-down of the various costs estimated by the individual carriers because of the varying methods of accounting and bookkeeping and charging of expenses within the several companies. As an example, it cited figures reported by the airlines to CAB showing a range in costs from \$440 per departure for C & S, with 14 departures per week, to \$2,100 per departure for TWA, with 18 a week.

In view of this situation, the committee adopted as its first objective a determination of what costs could be eliminated from the ANTSCO operation with no resultant lowering of efficiency and, secondly, what costs could be eliminated which might improve efficiency.

Its studies led to the unanimous opinion that there were too many people employed on the ramp at Willow Run, and that relatively low efficiency was being obtained. An analytical evaluation of the efficiency



Honored by UAL—Capt. George I. Myers, superintendent of United Air Lines' flight training center at Denver, is shown on the left receiving a diamond-studded pin for 20 years of service from W. J. Addems, general manager of flight operations. Myers has had a hand in training a major portion of UAL's 1,000 pilots.

of the respective ANTSCO functions resulted in these ratings: (Legend: good, satisfactory, fair, poor, unsatisfactory).

porters and consolidated stores—**good**;

ticketing, over-all lobby supervision, food handling and ramp agents—**satisfactory**;

line service—**fair**;

cargo handling—**fair to poor**; (poor being applicable to all-cargo flights); refueling, cabin service and coordination between functions—**poor**;

weight and balance—**poor**; (due to a lack of flight pre-planning);

over-all ramp supervision—**unsatisfactory**.

The ratings as to condition of facilities and equipment were:

lobby, cabin stores, aero stores and appearance of lobby service personnel—**good**;

lobby offices and appearance of ramp agents—**satisfactory**;

ramp offices, personnel morale and working-level supervision—**fair**;

administrative supervision—**fair to poor**;

ramp and ramp equipment—**poor**;
mechanical condition and appearance of refueling equipment and appearance of ramp personnel other than agents—**unsatisfactory**;

experience level of all personnel—**low** (estimated to average 6 months).

Personnel to Be Cut

The committee recommended that ANTSCO personnel be reduced at once from 318 to 253, the proposed eliminations to include 16 control ramp agents, 16 mechanics, seven lobby agents, seven porters, six cargo handlers and six each in fuel service and cabin service. It also recommended a reduction of personnel in the administrative and landlord functions of ANTSCO and the consolidation and transfer of certain functions to effect efficiency and savings. Net monthly savings from the proposed personnel cuts were estimated at about \$13,250.

The committee's report noted "evidence of strong currents of difficulties, normally referred to as personalities, on both sides to further complicate the problem." It sketched the problem in these words:

"As a whole, the local representatives of the airlines were imbued with the idea of assisting and working out the problems of consolidation . . . but very few realized that in making (the experiment) work each would have to depart from his previous conceived idea of operating practices.

"When it appeared that consolidated services would have to depart from practices which had become sacred in the individual companies, (they) were torn by their zeal to correct and administer the procedures in the manner which experience had



Airspeed Ambassador—British Overseas Airways is expected to place a production order for the Airspeed Ambassador to replace its Vickers Vikings in two or three years. The twin-engine, high-winged, pressurized transport has a range of 1,000 miles, cruising speed of 255 mph, and will carry up to 48 passengers. Engines are Bristol Centaurus of 2600 bhp each. Company states that in 40-passenger form and when flying over 400-mile stage lengths at utilization of 2500 hours a year, the direct operating costs should be no more than 2.65c per passenger mile.

dictated to them in the past. In the majority of the cases, their previous experience and loyalty to their individual companies consciously or unconsciously overcame their desire to see the experiment work. Hence, very shortly there developed a tension and feeling on the part of the individual airline personnel that they must in any manner or fashion destroy the existing experiment in order that they could once again set up (their) procedures . . ."

The committee then made the recommendation (which it frankly did not expect to be adopted) "that all presently assigned airline personnel should be transferred from Willow Run to other stations and replaced by other personnel. Furthermore, it suggested, the new personnel should be instructed by airline managements that "in no instances should the airline personnel individually instruct or correct ANTSCO personnel in the performance of their duties, nor should they attempt to compare their individual procedures to the procedures of ANTSCO except in an overall attempt to improve efficiency of ANTSCO's developed procedures."

It said this suggestion of a "wholesale transfer" should not be taken as a reflection on the individuals representing the airlines, but that it was made only in the interest of efficiency, "since it is impossible to move the consolidated operation, as such, from Willow Run to another location."

Consensus of those interviewed by the committee was that the difficulties at Willow Run, aside from the ones inherent in the location, had stemmed largely from the inexperience of personnel, low employee morale resulting from inadequate pay and a feeling of insecurity, lack of coordination between the various

ANTSCO functions, and a lack of pre-planning of the handling of flights. It made specific recommendations aimed at correction of the deficiencies noted.

In addition to the chairman, the committee which conducted the Willow Run study was composed of R. W. Hardesty, of Capital Airlines; S. T. McDermott, of United; John Groves and E. F. Kelly, of Air Transport Association, and two auditors. In addition, George Keck, UAL's superintendent of work analysis, devoted two days of work to the committee, and O'Farrell Estes, of Capital, gave three days to the work.

The committee's studies and recommendations, it is felt, not only will result in an improvement of the Willow Run situation but also has provided data that will be valuable in setting up further terminal service consolidations.

UAL Contract with Pilots Includes Grievance Provision

United Air Lines in mid-January reached agreement with representatives of the UAL master executive council of the Air Line Pilots Association for a new pilot contract which will contain the grievance machinery suggested by UAL President W. A. Patterson.

The grievance machinery proposed by Patterson provides that pilots may take up their grievance directly with their next superior officer and then on up to the top of the company, if necessary. If this does not result in settlement, the grievance would then be handled through the union. Patterson has stated that more than 90% of union contracts today contain this type of grievance machinery.

AMERICAN AVIATION

Faulty Planning May Produce 'White Elephant' Airports

A number of the larger cities in the United States are building or planning to build airports to help relieve the congestion which so severely plagues aviation in these early years of the Air Age. By proper planning, these cities can do much to advance the progress of aviation. By improper planning, they can defeat the very purpose to which their airport programs are dedicated.

It is only natural that the desire to have an excellent functional airport is often compounded with the elemental American desire to make each airport the largest and the finest in the land. But before the country becomes committed to too many of these super installations, it would be well to examine the present status of technical knowledge in allied fields. Thus it may be possible to predict whether these larger projects are to become monuments to aviation or white elephants to their respective sponsors.

Several years ago the design for a tangential configuration of runways was proposed. This design incorporated so many desirable characteristics, particularly from the standpoint of ground movement of aircraft and efficient use of real estate, that its academic acceptance was not long delayed. The design contained evolutionary provisions which apparently could anticipate the growth of aviation for many years to come. It seemed to offer a "Union Station" for aircraft which in itself is a most worthy goal. But the evolutionary aspect in particular was, and is, entirely dependent upon the complete solution of other problems, especially that of air traffic control. For example, it has been claimed that a six-runway tangential system with a theoretical capacity of 180 aircraft movements per hour could be expanded into a twelve-runway airport with a theoretical capacity of 360 aircraft movements per hour.

Related Problems Important

Presented with this enticing evolutionary theory, some of our cities appear to have been convinced that they can solve their airport problems for once and for all by the construction of one such union air terminal. Great harm to aviation can result from the prosecution of such a plan unless it is determined beyond any possible doubt that other related problems can be solved coin-

Airport Program Scores

Inauguration of service by Pioneer Air Lines to the Hale County Airport, at Plainview, Tex., on Jan. 5, marked what is probably the first instance of direct benefit to a community and an airline from the Federal-aid airport program.

This airport was one of the first to be built under the new CAA airport program, and its use by Pioneer marked the first scheduled airline use of an airport constructed under the Federal-aid program.

identally. It would be well to examine here some of the interrelationships between air traffic control and the super airport.

Sunday supplements to the contrary, the civil air traffic control system of today, as well as that of the predictable future, is and will be based upon the allocation of a certain amount of theoretically inviolable air space to each individual aircraft in the movement pattern. The size of this unit of air space is dependent upon a number of factors, principal among which are the accuracy of the navigation system in use and the maneuvering space required by the fastest of the aircraft involved. Any other concept of traffic control appears either to violate the dictates of safety or to lose efficiency rapidly when subjected to traffic of considerable density.

As aircraft become larger and faster, the necessary maneuvering space increases in proportion so it is not likely that the air space requirements of individual aircraft will decrease materially in the near future. Aircraft operators have learned the hard way that the unexpected is the rule rather than the exception, and they desire to provide a safe maneuvering space down to the last possible moment in landing in order to be prepared for the unexpected.

The amount of air space above and adjacent to a civil super airport is not sufficient to accommodate a capacity movement rate of 360 aircraft per hour in instrument weather if it is granted that each aircraft must be provided with a safe maneuvering space. In clear weather, such a rate might be achieved, but in the interest of reliability of service it certainly is not desirable to encourage a prolongation of the present

spread between good and bad weather capacity of any airport.

For a 12-runway tangential airport to provide for a movement of 360 aircraft per hour, it is necessary that three diverging runways be used for take-offs and that simultaneously three converging runways be used for landings. This means a touchdown each 20 seconds on one of three converging runways by aircraft flying on converging courses!

No safe way to accomplish this feat electronically can be proposed today, particularly when it is remembered that adequate provision must always be made for the unexpected. And even if such an accomplishment could be demonstrated, there is a tremendous psychological hurdle to be overcome with the pilots who fly these increasingly intractable airplanes in to these converging runways in all types of weather with such small longitudinal separation.

Certainly the pilots must always feel that what they are doing is safe, and it will be difficult to convince many of them that to fly their airplanes toward each other on converging courses with less than one minute of flying time between aircraft is a safe procedure.

Comparison with Railroads

It is interesting to compare the control problem of aviation with that of the railroads. After many more years of experience in a far less complex field, a modern control system recently was installed on a short, dense traffic rail route. This system will not permit trains to proceed if they attempt to follow each other on the same track with less than one minute separation. The motor-man is automatically overridden and the brakes applied if he attempts to do so.

In this case (a) the maximum speed possible is about 60 miles per hour, (b) control is possible in only the longitudinal dimension, and (c) a train can always stop. Compare this control problem with that of the airplane which (a) has a maximum speed of several hundred miles per hour, (b) not only has, but must always maintain control in three dimensions, and (c) can never stop, but must always maintain a *minimum* speed of perhaps 120 miles per hour.

If the railroads, after a long experience with their simplified problem, only are willing to operate trains at one minute intervals, aviation planners with an infinitely more complicated problem certainly should assess the factors completely before talking lightly of an operation based upon less than one minute separation between aircraft.

The above arguments are advanced for the purpose of indicating that if all of aviation's eggs are placed in any one basket, the consequences may be disastrous. If any city esti-

mates that it ultimately must accommodate 360 aircraft per hour, it cannot safely plan to do this at one airport site in view of present knowledge. The six-runway and eight-runway tangential configurations are undoubtedly among the most efficient designs as long as only two parallel runways are to be used at any one time. To conclude that their capacities will increase in direct proportion to the number of converging runways in use is to base the decision upon desire rather than upon development probabilities.

Based upon the present state of the art, a large city desiring to plan adequately for the future has no other realistic choice than to start minimal development of several airports properly separated so that the available air space about each of them can safely accommodate the aircraft in a space separation traffic control plan. Unless this is done, a few years hence the city may find itself with all available funds committed at one large inadequate airport and without resources with which to develop other sites.

—By THE AERO ANALYST

Advances for Airport Planning Proposed for CAA Program

The Civil Aeronautics Administration has asked Congress to amend the Federal Airport Act to permit advances, up to \$10,000, to communities for the formulation of plans and estimates of costs in connection with proposed airport projects.

The proposed amendment to Section 6 would provide a means whereby the Administrator could make advance grants to those cities otherwise unable to finance the planning of their projects. These grants would subsequently be incorporated as part of the U. S. share of the allowable costs. Undue hardship on the community in financing its own preliminary studies would be the determining factor by which the Administrator would make such a grant.

Another amendment proposed by CAA would define as a Class IV or larger airport a field which upon completion would have one or more paved runways at least 4,500 ft. in length.

The amendments were included in the second annual report on the Federal Airport Act which CAA submitted to Congress showing detailed statements of the airport development accomplished, status of each project undertaken, allocation of appropriations, and itemized statements of expenditures and receipts.

Purdue Airport Conference

The second annual Purdue Airport and Fixed Base Conference will be held on Purdue University campus, West Lafayette, Ind., Feb. 16-17.

Kuter Rejected for CAB; Branch Resigns on May 1

With its ranks reduced from five men to three through the resignation of Col. Clarence M. Young and the ousting of Chairman James M. Landis, the Civil Aeronautics Board in late January produced another resignation, adding to President Truman's problem of finding suitable aviation policy-makers.

Harlee Branch, who had served on the Board since its organization in 1938, resigned, effective May 1, "because the high cost of living in Washington makes it necessary for me to undertake to improve my personal situation." His term does not expire until December 31, 1950.

Meanwhile, because of this same "high cost of living," the \$10,000-a-year vacancies on the CAB were literally going begging for lack of qualified men who, lacking independent means, could afford to accept an executive post in Washington at such salaries.

President Truman thought he had found a good solution to the CAB chairmanship problem last month when he persuaded Maj. Gen. Laurence S. Kuter, U. S. representative on the council of the International Civil Aviation Organization, to accept the position provided he could serve in the civilian capacity while still retaining his Air Force rank and pay (amounting to about \$15,000 a year). The Senate Armed Services Committee, however, rejected the President's request for special legislation to make this possible.

After the President had written a letter terming this action "a disservice . . . to the air policy of the United States," the committee agreed to reconsider its action on the Kuter nomination, but killed it again on January 20, day after a visit to the White House and a personal plea from President Truman.

Search for Civilian

With this avenue closed, the President turned again to civilian ranks. Efforts were renewed to persuade Thomas K. Finletter, chairman of the President's Air Policy Commission, to accept the CAB chairmanship, but Finletter showed as much reluctance to accept the post as he had shown when first approached on the subject prior to the expiration of Landis' term. George P. Baker, vice chairman of the Policy Commission and regarded as an extremely able man, also was said to have been sought for the job and to have turned it down.

Including the pending Branch vacancy, the CAB openings allow for appointment of two Democrats and one Republican. Present Acting Chairman Oswald Ryan, who with Branch is the only one to have served

continuously with CAB since its creation in 1938, is a Republican; Member Josh Lee is a Democrat.

T. P. Wright Resigns As CAA Administrator

T. P. Wright, Administrator of Civil Aeronautics, has submitted his resignation to President Truman in order to accept presidency of the Cornell University Research Foundation. He will also become vice president of the university and supervise the Curtiss-Wright laboratories operated by Cornell.

A salary inadequate for the job was given as principal reason for the resignation. Wright wrote the President that "my case is not unique, but rather the rule with those in government service in administrative position who do not possess independent wealth."

Wright's new position carries a salary about three times the \$10,000 received from CAA.

The President accepted Wright's resignation "with great regret." He congratulated him on his work during 7½ years of "outstanding service" to "help win the war and substantially to develop a strong civil aviation industry."

Smith Moves to New York In American Streamlining

C. R. Smith, chairman of the board of American Airlines, and Rex Smith, v.p.-public relations, have moved their offices from Washington, D. C., to New York in an organizational streamlining that went into effect, Jan. 1.

"Sales and treasury departments, which formerly showed supervision divided between the chairman and the president (Ralph Damon), now report directly to the chairman," according to an announcement in the company's *Flagship News*. "The chairman of the board is the chief executive officer of the company. In his absence, the president has the same responsibilities and authority in the direction of the affairs of the company."

"For the purpose of orderly division of duties and administration, the vice president-operations, vice president-engineering, the materials director and the personnel director report to the chairman through the president. Administration of these departments, within the framework of overall company policies, is delegated to the president."

"Other department heads report directly to the chairman of the board."

It is understood these moves result from recommendations made by a system-wide organizational study recently completed by Amos Culbert, vice president.

PO Plans Air Star Routes For Boosting Mail Volume

By ERIC BRAMLEY

The Post Office Department is at work on a number of projects, including a proposed system of aerial Star Routes, for getting more mail into the air and for keeping the air mail postage rate down.

This will mean more airplanes in the air, more revenue for the Post Office and, in turn, more revenue for the airlines.

To state that the PO wants all long-haul first-class mail to start traveling by air tomorrow would be to paint a false picture, but the fact nevertheless remains that it is working toward the day when this will be possible.

For the immediate future, however, the department's program can be summed up in two words—more volume. Volume and postage rates are closely related: to get more volume the rates must be kept low; to have low rates volume must be high.

A sure way of increasing volume is to establish domestic air parcel post, and a PO-approved bill will be introduced soon in Congress providing for this class of service.

In the not-too-distant future there is a possibility that a large number—perhaps 50 to 100—of aerial Star Routes will be established. These would not be operated by certificated airlines, but would be lightplane operations to hard-to-reach places. Not only air mail, but all classes of mail, would travel on these routes. They would benefit air mail in general by expediting deliveries and making people more conscious of fast service. This will require a change in the law, but the plan is more than a gleam in someone's eye.

Aiken Provides Spark

Sparking the PO's ideas on air mail is Paul Aiken, the recently-appointed Second Assistant Postmaster General, who has a genuine interest in air transportation. Aiken is providing a spark that has been noticeably lacking from the Second Assistant's office since the departure of Gael Sullivan.

Aiken is emphatic in his assertion that the air mail postage rate must remain at 5c per ounce, despite Congressional moves to increase it to 6c. He has pointed out that the 5c rate would have produced a profit for the PO in fiscal 1948 if the airlines had been paid 45c a ton-mile for carrying the mail.

As it is, the 1948 loss will be about \$22,118,000 on domestic air mail because it has been necessary for the Civil Aeronautics Board to raise the airlines' mail pay. However, if there

had been a 6c rate, the loss would have been only \$1,257,000 less, or \$20,861,000. The reason is that the volume would have been considerably less under a 6c rate.

As volume goes up, Aiken assumes that the airlines' mail pay rate will be less, so that expenses will not rise as fast as revenues. With a substantial volume increase, however, the carriers would stand to make more money even at a lower rate. Also, the PO's "surface costs" (mail messenger, letter carrier, etc.) on air mail do not rise in anywhere near direct proportion with a volume increase. Such an increase, therefore, substantially improves its revenue position.

In fiscal year 1950, which starts July 1, 1949, the PO, under a 5c rate, estimates that it will show a profit of \$9,088,000, while under a 6c rate this profit would be only \$358,000. Again, volume is the answer.

And these figures do not include parcel post, which would send volume much higher. The PO expects this class of mail to stand on its own feet.

Some idea of what it may mean in volume is given by Aiken: "The present volume of surface parcels develops approximately 1½ billion ton-miles largely of short-haul nature. Based upon the assumption that one out of 16 parcels would move by air, it is estimated that a volume of 100 million ton-miles of air parcels would be generated of an entirely new type of postal business, together with some diversion from surface transportation of the higher priority type of parcels

now moving in the only available postal channel."

The airlines would receive their regular air mail pay for carrying domestic air parcel post, and rates would be set accordingly. In general, except for the very long distances, this service would cost the public some 10 to 15c less per lb. than the present 80c per lb. air mail rate.

In connection with parcel post, there has been some question whether the PO would be taking cargo traffic away from the airlines by establishing such a system. However, Aiken points out that most of this traffic would consist of small packages which he says are not profitable to the carriers.

Surface Star Routes

The aerial Star Route idea, at least on such a broad scale, is new. At present there are over 11,000 surface Star Routes. They are operated by private contractors for carrying mail from remote post offices to railroad stops, for example.

Under law, only five aerial Star Routes are allowed, and two are operating. They can be established "because of the nature of the terrain and the impracticability of surface transportation." The routes cannot be more than 200 miles long, and the contractor can receive not more than 20c a mile for up to 250 lbs. of mail, plus 1c a mile for each 20 lbs. additional. However, a higher rate can be paid for circuitous routes of less than 75 miles.

The two now operating are: Air Tours Inc., from Port Clinton, Ohio, to Isle St. George in Lake Erie, a 45-mile round trip, six times weekly for nine months of the year and seven weekly the other three months, for which the contractor receives 92c a



Robinson Airport—Tentative CAA air carrier approval has been received by Robinson Airlines, intrastate non-certificated airline operating between New York City and up-state points, for this new airport at Ithaca, N. Y. Designed and financed by Robinson, the airport has a 3,000-ft. northwest-southeast paved runway which will be extended this spring to 3,800 ft., and a 3,800-ft. north-south runway recently completed. In lower part of photo is Robinson administration building, housing traffic and operations departments. All of Robinson's Ithaca operations have been transferred from the municipal airport to the new field.

mile; and Joseph A. McPhillips, operating from Charlevoix, Mich., to Beaver Island in Lake Michigan, 35 miles, three times weekly Jan. 1 to Mar. 31, 59c per mile. The higher rates are possible because the routes are short.

The PO will probably invite various lightplane manufacturers to operate a route on an experimental basis for a few weeks before getting further into plans for expansion of this type of service. Mentioned for an experiment is a route from Washington, D. C., to the eastern shore of Maryland.

Amendment to the law will be necessary to expand the Star Route system and to increase the payment, because the PO believes that it will be necessary to pay more than 20c a mile. Such routes would not necessarily be expected to break even or show a profit. The idea is to expedite the mail—to use the "highway of the air" when other means are not available, Aiken says. Payment for Star Routes would come out of the Star Route appropriation, and not air mail funds.

On the question of long-haul first-class mail by air, Aiken believes that it is sure to come. However, he agrees with the report of the President's Air Policy Commission which stated that the airlines must attain a reasonable degree of regularity before first-class mail can be carried.

But the PO intends to keep its eye on the first-class mail possibilities, and to collect all the data it can on moving such mail by air. For reasons which cannot be gone into, the PO, when the time comes for it to comment on this subject, will know more about it than most people think.

Convair Continues Liner Production; Price to Go Up

Answering industry speculation that the Convair-Liner transport program might be abandoned, Consolidated Vultee Aircraft Corp. has indicated that production will be continued, but at an increased price.

W. A. Blees, v. p.-sales, stated that "pending completion of a current re-survey of domestic and foreign requirements for the Convair-Liner type airplane, Convair is withdrawing its price of \$360,000, quoted for the transport last August. The transport will not be re-priced until the survey is completed and future Convair-Liner manufacturing costs and other price factors are determined."

ATA Considers Regional Offices

Air Transport Association is considering establishment of two more regional offices, one in New York and the other in Los Angeles. ATA has been operating a regional office in Chicago on an experimental basis, under John Groves, formerly of its Washington staff.

Airlines, Non-Certificated Lines Vie for Army Contract

A counter proposal whereby both certificated and non-certificated carriers would participate in the air transportation of some 2,000 Army dependents to Japan, was under consideration by Secretary of the Air Force W. Stuart Symington last week. The proposal provides that the scheduled airlines involved—Northwest Airlines and Pan American Airways—would be given, at published tariff rates, whatever business they could handle on regularly scheduled flights. The scheduled carriers, however, would not be permitted to fly extra sections in order to accommodate this special business.

The traffic that could not be handled on regular airline schedules would go to the two non-certificated carriers involved—Transocean Air Lines and Pacific Overseas Airlines.

The scheduled lines, through the Air Transport Association, had urged Symington, as a matter of policy, to require the Army to use the certificated airlines exclusively for this type of operation wherever and whenever they can be used. The airlines indicated willingness to add special flights to handle the business. Point was made that duplication in the operations is added expense for the taxpayer.

The non-certificated carriers contend that it is in the interest of the national defense to use air carriers who by their very nature can meet unusual and emergency requirements.

American Airlines, Banks Offer Quick Credit for Air Travel

Under an arrangement between American Airlines and banks in each of the cities it serves, prospective air travelers may now obtain quick, easy-payment loans for trips to Europe, Mexico, Canada and within the United States. The Flagship Credittravel Plan, as it is called, is designed to provide a simple, dignified, quick-service credit arrangement for the air traveler.

The prospective traveler obtains an application blank and note from an American Airlines ticket office, and the loan, unless disapproved, is usually available within 24 hours.

James Ray Becomes Adviser To Central Airlines Feeder

First consulting commitment of James G. Ray, who resigned recently as vice president of Southwest Airways, is to serve as adviser to Central Airlines. He will assist the carrier in getting its certificated feeder service underway. Ray's headquarters are temporarily in Oklahoma City, after which he will establish permanent offices for his consulting service in Los Angeles.

Aviation Calendar

Feb. 5—American Legion national aeronautical conference, Wright Field.

Feb. 6-7—American Legion national aeronautical conference, Indianapolis.

Feb. 13—Reunion of Air Transport Command men, Waldorf Astoria, New York.

Feb. 16-17—Second annual Purdue Airport and Fixed Base Conference, Purdue U., West Lafayette, Ind.

Feb. 17-19—ATA Meteorological Committee meeting, Peabody Hotel, Memphis, Tenn.

Feb. 26-27—Louisiana Aviation Conference, Shreveport.

Mar. 18-19—California State Aviation Conference, Hollywood Roosevelt Hotel, Los Angeles.

Mar. 19—National Flight Propulsion Meeting, Institute of the Aeronautical Sciences, Cleveland, Ohio.

Mar. 30-Apr. 1—Annual ATA Engineering and Maintenance Conference, Continental Hotel, Kansas City.

Apr. 4-8—Nineteenth annual convention American Association of Airport Executives and second annual snowing of American Airport Exposition, Congress Hotel, Chicago.

Apr. 24—Dedication of Skyways 1 and 11, and of CAA Aeronautical Center at Oklahoma City.

June 14-15—Airlines Medical Directors Association annual meeting, Royal York Hotel, Toronto, Canada.

June 15-17—Airport Management Conference, Texas A&M College, College Station. (Dean Howard W. Barlow in charge).

June 16-18—Aero Medical Association 19th annual meeting, Royal York Hotel, Toronto, Canada.

June 21-25—American Institute of Electrical Engineers summer meeting, Mexico City.

July 31—Opening of International Air Exposition (New York's golden jubilee), Idlewild airport.

Sept. 4-6—National Air Races, Cleveland.

International

March 8—ICAO Maps and Charts Division, Brussels.

March 30—ICAO Personnel Licensing Division, Montreal.

April 20—ICAO Rules of the Air and Air Transport Control Division, Montreal.

April 27—ICAO Facilitation Division meeting in Europe.

June 1—Opening of Second ICAO Assembly, Palais des Nations, Geneva. (About 3 weeks).

Sept. 2—Federation Aeronautique Internationale, Cleveland, O.

Sept. 8—ICAO Operations Division, Montreal.

Hamilton Hale, Veteran Air Counsel, Forms New Law Firm

Hamilton O. Hale, Henry I. Stimson, and John S. Russell, Jr., have formed a partnership for general practice of law under the firm name of Hale & Stimson, Chanin Bldg., New York City, with a Washington branch office. Hale joined the law firm of Pruitt and Grealis in 1932 when that firm represented Century Airlines and has been active in aviation accounts ever since. Until first of the year he was a member of Pruitt, Desvernine, Hale and Coursen. Hale is currently chairman of the ATA legislative committee.

AMERICAN AVIATION

107% Increase in Airway Funds Proposed for '49

Increased public spending on airways, highways, and waterways was strongly urged by President Truman in his Jan. 12 message to Congress, accompanying his proposed \$39.7 billion budget for fiscal 1949.

The President pointed out that with the current high level of economic activity making heavy demands upon the nation's transportation system, the Federal government "must not only perform its regulatory functions but must provide basic facilities and services on an expanded scale for highway, air, and water transport."

It was emphasized that most of the government's activity in transportation since the war represents "deferred maintenance," and that "little has been done so far to effect the long-run improvements that are needed."

Civil Aeronautics Administration

An increase from \$119,314,334 in fiscal 1948 to \$155,570,000 in 1949 was recommended for the Civil Aeronautics Administration. This includes \$23,099,000, or an increase of 107% for additional air navigation and landing aid facilities, and \$40,000,000 or a 23% increase in the Federal government's share of the Federal Airport program. Current appropriation for airports is \$32,500,000.

The President's message described the airways as in "urgent need" of improvement. "The installation of landing aids and modernization of other aids to air navigation must be accelerated in order to insure increased safety and regularity of air transportation, and thus provide a solid foundation on which private capital investment can carry this industry forward." The proposed airport funds were described as representing "the minimum level consistent with continued aviation development."

The \$23,099,000 request for air navigation facilities includes 90 units of distance measuring equipment, totaling \$2,003,100. These are used in conjunction with the VHF radio ranges, and would be installed on airways of highest traffic density, as part of an ultimate program of 107 units. Sixteen were provided in the 1948 appropriation. Other major items: 22 sets of precision beam radar to safeguard aircraft approaches for landing, \$2,970,000; 39 high intensity approach light lanes at high priority locations, \$2,370,000; 40 instrument landing systems, \$2,800,000.

Airport surveillance radar in 21 control towers would account for \$2,121,000; experimental installation of a traffic indicating system \$1,000,000; and improvement of Alaska airways serving international routes \$3,035,420.

Technical development funds totaling

\$2,000,000 were requested for CAA, compared with \$1,600,000 received for fiscal 1948.

CAA has requested funds for 17,945 employees in 1949, of which 12,011 are communicators, traffic controllers, and other airways operating personnel. CAA personnel this year total 15,482.

It is proposed to reduce the CAA aircraft fleet from 226 to 95 by Sept. 30, 1948, by selling the military surplus planes now used by CAA inspectors, and to rent lightplanes from private contractors instead. Current appropriation items include funds for purchase of two helicopters for training CAA personnel.

CAA estimates that revenue to the government from Washington National Airport will exceed requested operating funds (\$1,185,000) by approximately \$170,000.

Civil Aeronautics Board

A 20% overall increase was recommended for the Civil Aeronautics Board, from \$3,040,000 appropriated in fiscal 1948 to \$3,600,000 for next year. Approximately 40% of the increase of \$560,000 is for rate regulation, 33% for safety activities, 17% for economic and legal activities other than rate regulation, and the balance of 7% for general administration.

Two phases of CAB's work were emphasized in the Budget report, one the need for reducing the backlog of procedural cases, the other for action on airline petitions for increased mail pay.

The report showed particular concern over mail rate cases. "Because of the financial reverses suffered by the air carrier industry during the past year, a large number of petitions are now pending before the Board for revisions in mail rates. These petitions represent a considerable contingent financial liability to the government, and it is of the first importance, from the standpoint both of government economy and the maintenance of a sound financial condition within the industry, that these petitions be acted on by the Board with a minimum of delay."

Armed Services

The Air Force was recommended for a \$212,682,192 increase in appropriations and contract authorizations over the revised 1948 figure, total of \$1,494,792,000 compared with \$1,272,109,808. The Navy Bureau of Aeronautics was recommended for a \$138,000,000 increase, from \$340,640,532 to \$478,000,000.

The fiscal 1948 figures provided for procurement of 1400-1500 aircraft for the two services; recommended appropriations for 1949 would boost this combined figure to about 2,000.

The Budget report proposed \$48,000,000 for the National Advisory Committee for Aeronautics, an increase of \$4,546,000 over fiscal 1948. The increase is to provide for additional personnel, power, supplies, and equipment to accelerate progress in the NACA's research programs by making more effective use of newly constructed facilities.

Large Airport Operators Organize New Council

The Airport Operator's Council organized in New York in January is intended to supplement rather than compete with the functions of the American Association of Airport Executives, according to the founders.

Open only to public and governmental operators whose airports handle at least 1% of the total scheduled air carrier movements in the United States, the AOC will bring greater concentration upon problems peculiar to the larger commercial airports, which is but one phase of the AAAE's program.

Col. J. V. Dallin, chief of the Bureau of Aeronautics of the City of Philadelphia, was elected president of the new organization. Other officers are: first vice president, Robert Aldrich, executive director of the Minneapolis-St. Paul Metropolitan Airports Commission; second vice president, C. M. Young, general manager, Los Angeles Department of Airports; temporary secretary-treasurer, James C. Buckley, Director of Airport Development, Port of New York Authority.

Two directors elected were L. R. Inwood, director of aviation, City of Kansas City, and A. B. Curry, director of Dade County Port Authority of Miami, Fla.

NAL Clerks, Agents Strike But Operations Continue

A strike of clerks, reservation workers and ticket agents of National Airlines, represented by the International Association of Machinists, had not interrupted normal airline operations on Jan. 26. All schedules were reported to be operating. The strike was called Jan. 24, after an earlier walkout the day before had been called off.

Union sources claimed that 1,500 workers were out in Miami, Tampa, Jacksonville, New Orleans, Newark and New York. Company sources denied this, claiming that the number of workers who failed to report was only a very small percentage of total employees.

Negotiations between company and union over wage increases and working conditions were broken off in December. Company representatives claimed the strike was illegal, but IAM officers contended the union had notified the National Mediation Board of its intention to strike and that all Railroad Labor Act procedures had been complied with.

Idlewild Opening Set for July 31

President Truman has been invited to be guest of honor at opening of the New York (Idlewild) International airport next July 31. Dedication ceremonies will open an international air exposition.

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TWA, Capital Ask Rehearing On Retroactive Mail Pay

Capital Airlines and TWA have petitioned CAB for reargument and reconsideration of the board's decision early in December dismissing requests of each airline for retroactive mail pay. The petitions charged that the board had misconstrued pertinent sections of the Civil Aeronautics Act and had imbued its opinion with theories which have no place there.

Both petitioners said CAB had gone out of its way to "construe" and place a strained interpretation upon a clear section of the Act which empowers and directs the Board to set mail pay rates effective "from such date as it shall determine to be proper." The airlines argued that this language gives CAB a right to set retroactive rates and claimed that the board had confused its right to do so with its discretion, as expressed in a policy statement that it will not set such rates.

In its Dec. 5 opinion, CAB held that it lacked legal power to set retroactive rates, i.e. mail rates preceding the date a mail pay petition is filed.

TWA pointed out that the original decision had been signed by only three members of the four-man board, with Josh Lee dissenting. It suggested that the departure of James M. Landis left only two strong proponents of the Dec. 5 opinion who might be overruled by a 3-2 majority when the existing vacancies are filled. TWA said the matter should be reheard by the full new board.

Akron Opposes Airline Shift To Canton Memorial Airport

Proposed shift of four airlines from Akron Municipal to Canton Memorial Airport has been condemned by George C. Neal, counsel for the city of Akron, as the "unique spectacle of a business trying to make it harder for the customer to reach the place of business."

In oral argument before CAB last month, Neal declared that the Canton airport was 17 miles farther from downtown Akron than the present field, and that a move would swell the ground transport time of an air journey to impracticable proportions in some cases. The airlines, Neal asserted, "should not be permitted to walk out on city investments" in airports without a very clear showing that public interest demanded it.

Position taken by the four carriers involved—American, Eastern, Capital, and United—is that the present Akron airport is unsuitable for all transports but the DC-3, and that progress toward all-weather flying demanded a move to the newer, larger, and less obstructed Canton field. Counsel for Capital stated that the airline could realize annual savings of \$68,000 through use of Canton.

February 1, 1948

Hearing in Air Freight Rate Case Opens Before CAB, Feb. 2

Hearing in the important Air Freight Rate Case is scheduled to open Feb. 2 in Washington before CAB Examiner Herbert K. Bryan. Issues to be tried are: (1) Whether existing air cargo Tariffs are unjust or discriminatory, and (2) If present rates are discriminatory, what are the lawful rates which CAB should prescribe.

In determining lawfulness of the rates the following factors will be considered: (a) cost of service and value of service; (b) feasibility of fixing rates for carriers as individuals, by classes, or as a whole; (c) extent to which air freight should be developed as by-product in passenger planes of certificated carriers, or as all-freight operations by all-cargo carriers; (d) possible financial burden on or benefit to other types of traffic carried by certificated carriers.

CAB Actions

Jan. 8—Show cause order issued to Alaska Coastal Airlines proposing mail rate of 45c per airplane mile. (Docket 3142).

Jan. 9—Show cause order proposing mail rates for Colonial Airlines' New York-Bermuda and Washington-Bermuda routes. (Docket 3006).

Jan. 15—Decision amending foreign air carrier permit of British Overseas Airways Corp. to make New York, Baltimore and Washington co-terminals on BOAC's U. S.-Bermuda service.

Jan. 19—Decision awarding a Jamaica-Miami foreign air carrier permit to British South American Airways Corp. (Docket 3101).

Jan. 21—Order extending effective period of foreign air carrier permit of Linea Aeropostal Venezolana (LAV) for three months from Jan. 17. (Docket 2987).

Jan. 22—Decision awarding trans-Atlantic foreign air carrier permit to Aerlinite Eireann Teoranta (Irish Airlines). (Docket 3092).

Jan. 22—Decision adding Perry and Leesburg, Fla., as new intermediate points on Florida Airways' feeder Route 75. (Docket 1668 et al.).

Calendar

Feb. 2—Hearing on the application of China National Aviation Corp. for authority to serve Okinawa on its trans-Pacific Foreign Air Carrier Permit Route. (Docket 3204). 10 a. m., e.s.t., Room 129, Wing C, Temporary Building No. 5. Examiner Richard A. Walsh. Postponed from Jan. 15.

Feb. 2—Hearing on CAB's consolidated investigation of Freight Rates and Tariffs. (Docket 1705 et al.) Examiner Herbert K. Bryan.

Feb. 4—Hearing on route consolidation proposals of Continental Air Lines, et al. Dockets 576, 994, and 3109. Examiner Paul N. Pfeiffer. Postponed from Jan. 19. Tentative.

Feb. 9—Hearing on Mid Continent Airlines' application to amend its Route 26 by adding Springfield, Little Rock, etc. (Docket 1956). Tentative.

Feb. 16—Hearing on application of Mid-Continent Airlines for an alternate St. Louis-Twin Cities Route. (Docket 1050). Examiner Richard A. Walsh. Tentative.

Feb. 21—Hearing on Mid-Continent Airlines' proposed Minot-Regina extension. (Docket 628). Postponed from Dec. 8 at MCA's request.

Mar. 15—Hearing on applications proposing additional Intraterrestrial Service in Hawaii. (Docket 2390 et al.) Assistant Chief Examiner Thomas L. Wrenn. Tentative.

Mail Rate Briefs

Lump Sum for PAA: CAB has increased mail pay award previously made to Pan American Airway's Latin American Division, raising from \$3,190,000 to \$3,219,855 a lump sum back payment for service performed between Mar. 1, 1944, and Aug. 31, 1945. The board denied PAA's exception to a fair return allowance of 7%, and provided that if PAA does not apply for a "need" rate before April 1, 1948, a previous order impounding nearly \$3,000,000 of "excess earnings" against distribution as dividends, will be ended automatically. CAB said LAD losses in early 1947 were due to management decisions to lower fares and increase capacity, and therefore refused to increase mail pay for that period.

NAL Seeks 95c Rate: National Airlines has applied for mail rate covering its Tampa-Miami to Havana route (FAM-32), asking 95c per revenue mile to compensate for losses of \$64,002 sustained between Dec. 15, 1946, when route was inaugurated, and Nov. 30, 1947. NAL said losses were due to competition by Pan American Airways, Linea Aeropostal Venezolana (LAV), and Peruvian International Airways. Carrier also claimed "exorbitant charges" levied by PAA for facilities at Havana's Rancho Boyeros airport contributed to its operating deficit.

Piedmont Feeder: Piedmont Aviation of Winston-Salem, N. C., has applied for temporary mail rate of 60c per airplane mile for first six months of operation, 55c for succeeding three months, 50c for next three months, and so on down to 35c rate. For permanent rate, Piedmont asked payment on sliding scale basis in effect for Pioneer Air Lines, based on 45c per mile and varying with passenger load factors. Company plans to start service about Feb. 14.

Western Amends: Western Air Lines has filed fourth amendment to pending petition for permanent systemwide rate to request payment at 38c per plane mile. Previously company asked 25c. WAL states that despite economies, including personnel reduction of 867 or 36.2% during past year, costs still exceed revenues.

Panagra 89c Rate: Pan American-Grace Airways has increased its mail pay requests, indicating that it requires not less than 76.57% per plane mile for a 300 lb. base load for period Jan. 1-Dec. 31, 1947, and not less than 89.29c per plane mile for period beginning Jan. 1, 1948. Company had sought 69.34c for 1947, and 70.61c starting Jan. 1.

Colonial Accepts: Colonial Airlines has accepted following rates for Bermuda operations: (1) Aug. 1, 1947 through Feb. 29, 1948, base rate of 91c per plane mile; (2) two-year period ending Feb. 28, 1950, base rate of 31c per plane mile computed on sliding scale involving passenger load factors; (3) for period after Mar. 1, 1950, rate of 75c per ton mile computed as though the average load were not less than 500 lbs. for average daily mileage actually flown on outbound trips not in excess of 1,009 miles. Initial rate was estimated by CAB to produce total mail compensation of approximately \$343,500 in seven months, allowing a 5% return on recognized investment of \$982,524.

TCA's Suggestion Plan Benefits Employees, Company

Trans-Canada Air Lines' Employee Suggestion Plan, originally set up in 1944, has been yielding worthwhile benefits both to the company and employees since its reorganization last November.

During first seven weeks of operation under the revised plan, employees collected more than \$2,000 for the 125 suggestions found acceptable from among a total of 1,050 offered. Savings to the airline are expected to be considerable.

Where the actual cash savings to the company can be evaluated, awards are based on 10% of those savings during the first year after a suggestion's adoption. Awards for suggestion that provide savings or value of a less tangible nature are provided in \$5 units up to a maximum of \$25.

In the first lot of awards finalized by the Suggestion Bureau, L. B. Cook, sub-foreman in the Winnipeg accessory shop, received the highest award of \$180 for a suggestion to modify the manual mixture control on carburetors that has advanced the time for checking and also resulted in a saving of man-hours. Runner-up award went to P. E. Giguers, shift foreman in the instrument shop at Winnipeg, and F. Hazelhurst (no longer with TCA), who split an award of \$164 for a suggestion to modify direction gyro instruments to improve their illumination.

Other Winners

Other winners included: W. Kay, mechanic at Toronto, \$150 for his part in designing a cowl flap pin resulting in a saving of time and labor on cowl servicing; G. Watson, mechanic in the Winnipeg machine shop, \$66 for devising a procedure to reclaim seized roller and pin type bearings; and R. G. Chatfield, mechanic in the Winnipeg instrument shop, \$50 for a new cap design on the oxygen manifold block.

The plan is administered by an Employee Suggestion Bureau, operating under the personnel department of the airline. As the activities of Trans-Canada fall into 12 well-defined groups, the Suggestion Screening Committee is composed of 12 divisions, each consisting of a deputy for the department head concerned, and a representative from the employee group of groups concerned.

Objectives of the plan are: (1)

to develop and encourage the creative abilities of personnel; (2) to reveal, in a fair and efficient manner, the constructive ideas of personnel, and to arrange an unbiased analysis of their worth; (3) to improve the efficiency of TCA by the adoption and use of any worthwhile employee idea; (4) to increase the safety of passengers and employees by careful review and adoption of practical safety suggestions; (5) to provide adequate remuneration and recognition to employees whose ideas are adopted for use.

All employees are eligible for awards with the exception of: department heads; supervisors; engineering personnel; employees of the equivalent rank of foreman and chief mechanic; other employees whose duties require them to recommend changes.

Airlines Do Not Threaten Ship Traffic, Falck Says

International airlines will not take traffic from steamship companies, Thomas S. Falck, Jr., chairman of the board of DNL Norwegian Air Lines and board chairman of Scandinavian Airlines System, said recently on his election as president of the Norwegian Shipowners Association. His election to this post "is recognized as a new sign of an increasing cooperation between Scandinavian aviation and shipping," a DNL statement said.

Falck stated that "there is no reason to be afraid that aviation will take passengers from shipping. We believe that traffic promotes traffic and, therefore, we think it is absolutely right that the big shipowners in Scandinavia go in for the building up of Scandinavian aviation.

"Personally, as an old shipping man, I believe that aviation is necessary for keeping shipping up to the highest standard. Recently I was able to do more work in 12 days for my shipping interests than I else would have been able to do in two months. I have met a great number of other shipping people who traveled around in the same way, studying the markets and making new contacts, and all of them based their business travel and arrangements on the air services, which gave them greater possibilities to carry out a more extensive program . . .

"In the coming years new 'commercial roads' of the air will be made,

just as they were built up some hundred years ago on the oceans by the increasing shipping. We have yet only started on this building in the air, and nobody knows how the world picture will look in 10 or 20 years time. Personally, I believe that freight transport by plane is today in its childhood, but also in this branch we can all look forward to a very great future."

Falck was recently named chairman of the board of Scandinavian Airlines System for 1948, succeeding Per Kampmann, managing director of DDL, Danish Air Lines.

KLM Pension for U. S. Employees

A pension plan for American employees of KLM Royal Dutch Airlines has been announced, with employees contributing 5% and the company contributing at least 10% of their basic salary.

Benefits will include an old-age pension at the age of 60 for women and 65 for men, to an annual amount of 2% for each year of service with the company, with a maximum of 70% of the employee's last basic salary figure. The plan also provides total and partial disability payments and a survivors' pension for widows and children of employees.

SABENA 25th Anniversary

SABENA, the Belgian airline, will celebrate its 25th anniversary May 23 with a week-end of aircraft displays and special events in Brussels. U. S. manufacturers and airlines have been invited to participate.

Foreign Air Briefs

Argentina: Annual report of the Argentine Secretariat of Aeronautics for civil aviation activities showed that during 1947 a total of 870 pilot licenses were issued. Civil flying hours totaled 69,000, increase of 34,000 hours over 1946.

Australia: While record bookings are expected on the direct Sydney-London air services during 1948, a slump in Pacific traffic is predicted because of the lack of dollars. British Commonwealth Pacific Airlines is to take over the Pacific services on April 21, when Australian National Airways' contract expires. ANA plans to develop extensive overseas charter operations.

Scandinavia: The Scandinavian airlines are working toward a joint sales program, more closely-knit maintenance, and a more economical traffic program. It is expected that the Scandinavian Airlines System insignia, as well as insignias of the respective companies, will be painted on all planes operating under the Scandinavian flags.

South Africa: British Overseas Airways Corp. and South African Airways have announced their intention of starting air freight services on a greatly increased scale, with Avro Yorks withdrawn from passenger operation as soon as the Solent flying boat service begins.

AMERICAN AVIATION



You're looking at tomorrow!

One glimpse of the great new XB-47, built by Boeing for the U. S. Air Force, will project you far into the future. For here is an airplane startlingly different in design—as revolutionary today as was the first Boeing Flying Fortress in 1935. It is the first bomber specifically designed to take full advantage of jet propulsion.

How fast is it? The actual figures must remain a military secret, but its arrow-like lines and enormous power are enough to tell you it was designed for terrific speeds.

It's a big airplane—roughly the same size as the famous Boeing B-29—and can carry a ten-ton bomb load. Six

turbo-jet engines give it a rated thrust of 24,000 pounds, which is the equivalent of nearly three times the power of the Superfortress.

But the most significant fact about the XB-47 Stratojet is its radically new aerodynamic design.

The slim, swept-back wing and tail surfaces, sleekly beautiful body lines, streamlined nacelle mountings and tandem landing gear look ahead to the era of supersonic speed.

Boeing leadership in research and engineering gave the nation the B-17, the B-29 and the new B-50. Now it opens new vistas for American Air Power in the realm of jet-propelled flight.



Boeing test pilots Robert Robbins and Scott Oiler, who flew the Stratojet on its historic first flight.

For the Air Force, Boeing is building the B-50 bomber, XB-47 jet bomber and C-97 transport; for the Army, the L-13 liaison plane;

and for six major airlines, the twin-deck Boeing Stratocruiser.

BOEING

PERSONNEL

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Administrative:

Gilbert G. Budwig, who joined National Airlines 18 months ago as director of maintenance, has been appointed director of planning, a new position created by the airline. His career in aviation dates back to 1916 when he flew with the Curtiss Exhibition Co. in Buffalo, N. Y. From 1927-33 he served in the aeronautics branch of the Department of Commerce, as inspector and later as director of aeronautics.

Richard N. Bale, Air Force veteran, former assistant to director of the Bureau of Foreign and Domestic Commerce, and founder of a Peruvian non-scheduled cargo and passenger airline, has been named executive representative for Braniff Airways, with headquarters in Lima.

John R. Wiley has been advanced from assistant to v.p.-operations to the newly-created position of director of the Inventory Control Division of American Airlines. He has been with the company since 1940 and previously was in the administrative department of Railway Express.

Gordon A. Rust has resigned as vice president for public relations for Peruvian International Airways. He announced no immediate plans.

Robert H. Herrnstein has been elected assistant treasurer of Northeast Airlines, with headquarters in Boston. He formerly was director of economic development and budgetary control.

Robert W. Miller, president of the Pacific Lighting Corp., San Francisco, has been elected a member of the American Airlines' board of directors, succeeding **James Bruce**, of Baltimore, who resigned to become U.S. ambassador to Argentina. Miller is a director of the American Trust Co., Pacific Public Service Co., Paraffine Companies, Inc., Tucker Investment Co., and the Standard Oil Co. of California.



Harry R. Canaday
PAA Training Superintendent



Gilbert G. Budwig
NAL Planning Director

Hal N. Carr, v.p.-traffic for Wisconsin Central Airlines, has been appointed to newly created position of executive vice president. He will coordinate operations of the entire company, in addition to continuing supervision over traffic department activities. **Robert Gardner**, of Milwaukee, has been named assistant treasurer-controller and will be in charge of accounting and budget control.

William H. Hipple, who recently returned from public relations duties with American Overseas Airlines in Scandinavia, Germany, and Holland, has been appointed southern regional director of public relations for American Airlines with headquarters at Dallas. Before joining AOA he was assistant foreign editor of *Newsweek*.

Stuart B. Goldthorpe, former chief accountant, has been appointed assistant controller for Capital Airlines. He has been in the treasury department since 1943, and previously served as supervisor of costs and budgets and as technical assistant to the treasurer.

David E. Nopper, formerly news editor of American Airlines and before that director of the company's Washington public relations division, has been appointed eastern regional director of public relations, with headquarters in New York.

Operations-Maintenance:

Harry R. Canaday, who joined Pan American Airways in 1934 as apprentice pilot in the Latin American sector, has been appointed superintendent of training for the Atlantic Division. He will be in charge of a consolidated training unit including sections in ground training, flight service, flight operations, communications, and traffic. His recent duties have been as district manager of operations throughout Africa.

E. B. Curry, who has held several top posts with Northwest Airlines since joining the company in 1943, has been appointed general superintendent of aircraft maintenance. He takes the position vacant since the death last July of **Martin E. Leadon**. **C. E. Swanson**, manager of engineering, has taken over Curry's former duties as NWA's chief representative at the Boeing plant in Seattle, in connection with the Strato-cruiser procurement program.

C. N. (Jimmy) James, pioneer air transport pilot, has been appointed director of safety for Western Air Lines, with which he has served since 1926. The President's Special Board of Inquiry on Air Safety recommended recently that all airlines appoint a full-time safety director, and Western was first to act on the suggestion.

Homer J. Merchant, veteran of more than 20 years in aviation, has been named assistant general manager of ground services for United Air Lines, with headquarters at Denver. Merchant began his aviation career with Western Air Express in 1928, joined UAL in 1931. In 1942 he became western regional traffic and sales manager and in 1944 eastern regional sales manager. **Norval B. Rader**, assistant director of traffic and sales will temporarily assume Merchant's former duties.

Allan B. Barrie has resigned as v.p.-operations of California Eastern Airways to return to Alvin P. Adams & Associates in Los Angeles. Barrie went to Cal Eastern a little more than a year ago when Alvin P. Adams became active in management of the freight carrier.

Rahland C. Zinn has been appointed engineer of Pan American Airways' Latin American Division, succeeding **Joseph J. Dysart**, who was transferred to New York as division engineer of the Atlantic Division. Zinn joined PAA 12 years ago as an apprentice engineer, and his most recent post was division industrial relations manager. He becomes one of PAA's youngest major departmental heads at the age of 36.



C. N. (Jimmy) James
WAL Director of Safety
AMERICAN AVIATION

Traffic and Sales:

Eugene Ostheimer, former passenger traffic manager for Chicago and Southern Air Lines, has been appointed director of tariffs and schedules for Northeast Airlines.

M. E. (Chatty) Sullivan has been named assistant general traffic manager of Western Air Lines. He has been manager of rates and tariffs, and in his new position will continue to head WAL's tariffs and customs division.

Clay Bernard has been advanced to assistant to the vice president of sales of Western Air Lines, with northern California as his territory and offices in San Francisco. Before joining WAL, he was assistant to the v.p. of the Pacific Greyhound Lines.



Roberts

Urquhart

Clifford E. Roberts has been appointed southern regional traffic manager for Mid-Continent Airlines, with headquarters in New Orleans. He had been district traffic manager for Pan American in New Orleans since 1942.

J. O. "Bill" Urquhart has been promoted from assistant general traffic and sales manager to manager of special events for Capital Airlines, a new position. He has been with Capital since 1935 except for service with the Air Transport Command.

James B. McCullough, formerly with Capital Airlines at Detroit and Washington, has been appointed district traffic manager for Northwest Airlines at Pittsburgh, where the airline is setting up traffic and reservations facilities in the Park Building and a ticket counter in the lobby of the Frick Building in preparation for inauguration of service on its extension to Washington.

W. K. (Ken) Ebel, v.p.-engineering with the Glenn L. Martin Co. since 1941, has resigned to become director of engineering for the Curtiss-Wright Corp., Airplane Division. Ebel had been with Martin 25 years. **D. Roy Shoults**, chief engineer of the company since last June, was named to succeed him. Shoults was v.p.-engineering for Bell Aircraft before joining Martin.

David E. Postle, who resigned from the safety regulations section of CAB last September to join Bell Aircraft Corp., has been appointed domestic sales manager of the company's helicopter division.

February 1, 1948

Airline Commentary

By ERIC BRAMLEY

SEVERAL issues ago we published excerpts from a very humorous booklet distributed by Air-India Ltd., an Indian airline . . . Purpose of the booklet was to tell passengers what to do and what not to do when flying . . . The booklet has been borrowed from us by four airlines and now one of them re-borrowed it . . . It sounded as though it had been written by an American, but our source insisted that the author was Indian . . . Anyway, since then we've been asked several times if we've discovered the author's identity . . . Yes, we have, and he turns out to be an old friend of ours—S. K. "Bobby" Kooka, Air-India's traffic manager . . . Bobby has numerous friends among U. S. airline people, and they'll be glad to know he's an author . . .

A friend of ours who is connected with the aircraft manufacturing business writes to say that he's a little tired of guys who run around "talking about the airlines and the lousy service they give; about subsidies and this-and-that—all these things that never, never happen on the railroad" . . . So, he says, "give me room and lemme swing" . . . And he proceeds to swing as follows: "Like a big boob I trustingly went with a friend (non-flying) to exchange seats on that g-r-e-a-t railroad, the (censored), at its Washington downtown office. First, we picked up a ticket with a number on it from a well-hidden dispenser. It was like the old meat market war days. They were serving No. 10 at the time. We were No. 56. One and one-half hours later, our number came up. Then it took an obviously efficient girl some five minutes to go through the paperwork and phone work of shifting over the already confirmed seats. In addition, despite the fact the day was not a holiday but fell in a holiday season when they knew darn well traffic would be heavy, less than half the stations at the counter were manned. Suppose an airline had pulled something like that? Wow! Then, being a trusting soul, I later called up to find out if the big white rain in New York had tied things up. Got an intelligent answer. Quote: All I know is the trains are leaving here on time—how dya expect me to know whether they're getting through? Unquote. Slam! Our boys aren't doing so bad, despite all their troubles" . . . No further comment is needed . . . We merely quote this so some of you reservations people will feel better.

Recently we reported that a limousine got lost between Airlines Terminal and Newark airport and arrived at the field a long time after the plane had departed . . . We have heard (as we knew we would) from John Carey, who operates the limousines . . . He wants us to know that on that particular day the regular route was closed, and the driver was no end confused on the detour . . . John really runs a first-class service and we weren't insinuating that he loses vehicles every day . . .

Hey, have you heard about some of the hazards connected with air transportation? . . . Two airline passengers took a taxi from Chicago airport to downtown, and the driver stopped in one of the darker, tougher sections of the south side and told them that the tariff would be five bucks apiece—or else . . . It looked black for a minute, except that one of the passengers spied headlights in the rear, jumped out the door and stopped the approaching car, which happened to be another taxi . . . The second driver, who was an honest John, took them to the Loop . . . Then there's the one about the airport limousine that was held up between St. Louis airport and downtown . . . Two men got on at the airport and, after the trip was rolling along, proceeded to relieve the passengers of their valuables, at gun-point . . . The men had a get-away car planted at a certain point along the limousine's route . . . The only thing that ruined an otherwise perfect set-up was that the driver had to stop for a traffic light, and two policemen in a squad car saw all the passengers with their hands up . . . The thug carrying the valuables was nabbed . . . It just goes to show that you ain't safe anywhere these days . . .

Domestic Plane Utilization Decreases 16% in 1947

One little-noted clue to the financial losses incurred by the domestic trunkline air carriers last year is found in official daily plane utilization figures, which show a sizeable and serious decrease in revenue flying hours per commercial transport.

Official CAB figures covering the operating experience of 16 domestic carriers show that average daily revenue hours flown during the first 10 months of 1947 were 7 hours 48 minutes, representing a decrease of 16.6% from the 9 hours 21 minutes average for the same period of 1946, and a 27.1% drop from the 1945 10-month average.

The serious import of this decline in aircraft utilization arises from the known relationship of high utilization of flight equipment to operating profits. The costliness of the modern airplane, taken together with its comparatively short life span, makes it important to obtain maximum daily utilization, assuming load factors can be held up to a reasonable level.

The decreases in daily revenue hours flown ranged from 24 minutes, or 4.1%, for Delta Air Lines, to 3 hours 24 minutes, or 35.1%, for Braniff Airways. Only two of the carriers showed increases in daily aircraft utilization the first 10 months of 1947, as compared with the same period of 1946. Inland's utilization figure went up 31.2% from 6 hours 21 minutes to 8 hours 20 minutes, and Mid-Continent's increased 7.7% from 7:44 to 8:20. Among the 14 companies experiencing drops in plane utilization, eight had decreases of more than 20%, as shown in the accompanying table.

EAL Has Top Average

Only one carrier—Eastern Air Lines—was able to achieve an average daily utilization in excess of 10 hours during the period covered. Its record was 10 hours 10 minutes, a 21.1% decrease from its average daily utilization figure of 12 hours 53 minutes for same period of 1946. For same 10 months of 1946, six carriers had an average daily plane utilization of more than 10 hours, and 11 of the 16 carriers reported more than 10 hours' average daily utilization in the same 10 months of 1945.

Basic reason for last year's decreased utilization was the failure of 1947 air passenger travel to measure up to advance expectations. The boom traffic of 1946 encouraged car-

riers to acquire additional flight equipment and to increase schedules, with the result that they found themselves with too many planes and too many daily schedules when the expected 1947 traffic increase failed to materialize. Accordingly, schedules were cut out where possible; non-stops replaced one-stops and one-stops replaced "milk-runs," reducing flying time; planes were kept on the ground more and more since there was not sufficient payload to make it profitable to keep them in the air.

One airline operations official stated the case in simple terms when he said:

"High utilization is desirable only if your flights have good load factors. There's no percentage in flying an empty or half-empty plane just for the sake of getting more utilization out of it; it's cheaper to keep it on the ground."

The CAB's utilization figures take into account all of a carrier's planes that are listed as being "in service," so when planes are kept on the ground they pull down the carrier's utilization figure.

The grounding of the DC-6's operated by American, United, Braniff and National, who owned a combined total of about 85 of the planes, did not affect the figures herein, as the groundings did not occur until Nov. 12.

Average Trip Length Drops to 422 Miles

Length of the average domestic airline passenger journey last year showed a slight decline for the second consecutive year, according to

operations figures filed with the Civil Aeronautics Board.

Covering operations of 16 domestic trunkline carriers during the first 10 months of 1947, the figures show that the average revenue trip-miles per passenger were 422, compared with approximately 440 in the same period of 1946, and a 450-mile average in the first 10 months of 1945.

The average journey-length varied considerably with the individual carriers, reflecting to a considerable degree the individual route characteristics and traffic flow patterns of the 16 airlines. The trip-mile averages ranged from a high of 759 miles per passenger traveling on TWA to a low of 192 miles for passengers on Northeast Airlines.

Six of the 16 carriers—TWA, United, Northwest, American, Eastern and National—reported revenue trip-mile averages in excess of 500 miles.

Twelve of the 16 carriers reported decreases in journey-length averages for last year, as compared with 1946, but the decreases in most instances were slight. They averaged 32.3 miles. TWA had the largest decrease—87 miles—followed by National's 74, Northwest's 73 and Braniff's 66.

The decrease for all 16 carriers averaged only 4.2%, with the decreases running from less than 1% to above 13%. Inland, United, Western and Mid-Continent showed increases in average journey-lengths, with Western's passengers traveling an average of 6 miles farther than in 1946, United's traveling an additional 7 miles, MCA's going 2 miles farther, and Inland's passengers journeying an average of 77 miles farther than the year before.

ATA Engineering Conference

The Air Transport Association's annual engineering and maintenance conference will be held this year on March 30, 31 and April 1 at the Continental Hotel in Kansas City. Sessions will be conducted in the manner adopted for last year's conference, with three simultaneous round-table discussions on unrelated subjects each morning and afternoon.

	Av. Daily Rev. Hrs. Flown			% Change	Av. Rev. Trip—Miles			% Change
	1945	1946	1947		1945	1946	1947	
American	10:06	9:44	7:40	-21.2	587	525	501	-4.0
Braniff	11:14	9:41	6:16	-35.1	435	404	338	-13.8
Capital	10:12	9:00	6:10	-31.5	247	279	262	-6.1
C & S	11:51	10:09	8:13	-19.0	429	395	393	-0.5
Colonial	7:14	5:28	4:31	-17.4	302	297	296	-0.3
Continental	10:21	10:18	8:13	-20.2	387	372	346	-7.0
Delta	12:22	9:47	9:23	-4.1	376	410	407	-0.7
Eastern	12:58	12:53	10:10	-21.1	496	514	510	-0.8
Inland	8:39	6:21	8:20	+31.2	294	277	354	+27.7
MCA	8:02	7:44	8:20	+7.7	277	303	305	+0.7
National	10:30	9:34	7:53	-17.6	470	590	516	-12.5
Northeast	8:13	7:50	5:14	-33.2	213	203	192	-5.4
Northwest	11:44	11:12	8:47	-21.6	628	610	537	-12.0
TWA	12:04	11:11	8:39	-22.6	889	846	759	-10.3
United	11:00	10:37	9:33	-10.0	764	616	623	+1.1
Western	9:30	8:04	7:18	-9.5	411	399	405	+1.5
Industry	10:42	9:21	7:48	-16.6	450	440	422	-4.2

AMERICAN AVIATION

Negotiations Break Down Between TWA and Navigators

National Mediation Board on Jan. 21 reported that TWA officials had asked it to mediate a dispute between management and the Airline Navigators Association (CIO) over wages and working conditions to be included in a new agreement. Negotiations between the company and representatives of the airline's 96 navigators were said to have been broken off the day before with threat of a strike from the union officials.

Robert F. Cole, NMB secretary, said the board would ascertain what the specific issues are and then determine whether it has jurisdiction under the Railway Labor Act.

A navigators' strike, it is believed, would seriously interrupt, possibly suspend, TWA's international operations. Nearly all of TWA's first pilots on international runs are qualified navigators, and as Civil Air Regulations do not specify that the navigator must be a third member of the flight crew, some sources indicated that the airline might continue internationally on a limited scale, should a strike develop. The contract between company and union expired Jan. 1.

Round-the-World Navigation Aids Sought by 5 Agencies

Five government agencies last week asserted that this country should provide needed navigation aids along foreign airways to make flying safer for U. S. round-the-world air traffic.

The U. S. cooperates through the International Civil Aviation Organization in setting up weather stations and other facilities in foreign countries but no federal agency has authority to act outside this arrangement. The House Interstate Commerce Committee is considering H. R. 4428 proposed by the Air Coordinating Committee giving the Weather Bureau authority to establish these services in countries which cannot afford to do it themselves. The bill is supported by the Army, Navy, Commerce Department, Civil Aeronautics Administration and ATA.

Check List Deadline Extended

The CAB Safety Bureau has extended until Feb. 12 the deadline for comment on the proposed amendments to Parts 41, 42 and 61 of the Civil Air Regulations concerning cockpit check lists.

Proposals are that: "(a) No aircraft shall be operated in air transportation unless a suitable cockpit check list approved by the Administrator is installed in a readily accessible location in the cockpit and is appropriately used by the flight crew during each flight. (b) The cockpit check list shall include procedures prior to take-off, prior to landing and for power-plant emergencies.

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30 HOUR CHECK

BY DAVID SHAW

THE NAVY'S enthusiasm for its new non-inflammable hydraulic fluid is prompting the CAA to establish a program at Oklahoma City for testing the fluid in DC-3 and DC-4. They estimate that 1,000 hours operating time can be accumulated in a six-month test program.

The non-inflammable fluid, known as Hydrolube U-4 and manufactured by Union Carbide & Carbon Corp., weighs about 1.8 pounds per gallon more than standard fluids. This would add in the neighborhood of 18 pounds to a 10-gallon DC-3 system, and twice as much to a DC-4. It also costs a little more than present AN fluids—\$2.50 per gallon compared with \$1.85. Other than these minor items, and the possibility that the non-inflammable fluid may affect magnesium brakes, it remains for the CAA to establish whether it is or isn't a good thing for commercial use.

The Air Transport Association is discontinuing its shippers research division in favor of a three-man panel responsible for preparing basic regulations governing the shipment of hazardous materials by air. Other projects for which the shippers research division was to have been responsible have been sidetracked pending increased encouragement from traffic and cargo people in the airlines.

John K. Northrop, president of Northrop Aircraft, in discussing transonic flight, points out that there seems to be a popular belief that once the sonic barrier is passed flight again becomes easy and efficient. "This is not the case," he says. "There is a very sharp rise in drag in the transonic speed range. As this range is exceeded the rate of drag increase with higher speed is not so sharp but it always continues to climb. It will always be considerably more expensive, in terms of power required or fuel used, to fly at supersonic speeds than at subsonic speeds."

A recent movement among airline people to standardize weight and balance forms, as part of an overall standardization program, never grew beyond the suggestion stage. The suggestions called for establishment of a committee to deal with the problem, and for a special meeting late in January. So little interest was generated in the industry that the whole thing has been called off.

Mid-Century's new route extension between Kansas City and St. Louis (giving TWA its first competition between these cities) is more than just a new source of passenger revenue for MCA. The company's former route structure, with a dead-end run into St. Louis from Minneapolis and Des Moines, set up an aircraft utilization problem which cost money. Henceforth planes can be kept on the main route pattern without having to back-track from St. Louis to Des Moines, and MCA sees profits in improved utilization.

Airlines, Port Authority Plan Safety Program for Idlewild

The Port of New York Authority is making plans for the facilities at its new International Airport at Idlewild, in an attempt to provide the latest type fire protection and to plan as far as possible for safe operation. A meeting of airline safety engineers and insurance interest representatives was held on Jan. 7, with Port Authority officials to discuss these matters.

The Port Authority was represented by William Taylor, of their airport engineering division, and Gordon Hamilton and George McSherry, superintendent and assistant superintendent of La Guardia.

G. Tyler, safety superintendent, PAA Atlantic Division; C. S. Hayward, safety engineer, AOA; J. A. O'Donnell, superintendent-safety, AA; R. F. Holdren, supervisor, safety, TWA; C. Lauber, National Board of Fire Underwriters; J. Lederer, chief engineer, Aero Insurance; and J. Chase, Aero Safety Engineer also attended. While the meeting was more in the nature of a fact finding investigation than to fix and determine policy, many interesting ideas were brought up.

Reinforced Concrete

All agreed that for the type of hangar planned, reinforced concrete would afford better fire protection than either unprotected or protected steel construction. The possibility of using precast reinforced concrete construction was also explored, but no final conclusions were reached as to its practicality. Precast reinforced concrete would offer definite advantages in economy of repair in the event of building damage either from fire or aircraft crash and there is no doubt that serious consideration will be given to using this novel method of construction.

Present plans call for a reserve supply of water at the airport of the order of a million gallons. This will be available for fire protection in the event of a failure of water supply and would afford protection sufficient for 40 minutes of operation of all the sprinklers in the largest hangar planned. It was suggested that in addition a chlorinator be provided so as to allow using this reserve for domestic use in the event of an emergency. There is a probability that at least one runway will be provided with hydrants so that ships anticipating difficulty on landing may have the protection of adequate water for crash emergencies.

It is planned to provide rate of use operated deluge sprinkler systems in all hangar areas with conventional

wet closed head sprinklers in shops and offices. This is in accordance with accepted best fire protection practice.

Fog Type Sprinklers

The possibility of using fog type sprinklers in certain locations was discussed, but it was felt that they would offer no advantage except for very specialized applications. "Wetter" water for fire protection falls in a similar category since some of the wetting agents now in use are quite corrosive and in addition the lowered surface tension which their use would produce might affect the water distribution pattern of both sprinklers and hose streams. The use of wet water on crash trucks, however, may allow the production of water fog at much lower pressures than with untreated water.

Other matters discussed included lightning protection, water, air, and electric service outlet arrangements, drainage, particularly for hangars during sprinkler operation, and static grounding arrangements. The idea of providing a flapper valve which would be actuated by a change in barometric pressure and allow ventilation relief in the event of cyclone conditions was mentioned as a possibility. The use of radiant heating supplemented by unit heaters to take care of added loads when hangar doors are opened will eliminate the hazard connected with recirculating fumes from hangars through hot air systems.

CAA Uncovers Forged Certificates

An inquiry by the CAA into credentials held by airplane mechanics employed by major airlines in the New York metropolitan area has been disclosed with the arrest by the FBI of six men accused of "knowingly and willfully using or attempting to use forged CAA rating airman certificates." Hyman H. Goldstein, assistant U. S. attorney, named as the central figure, Donald T. Hendricks, who allegedly issued the certificates for fees ranging from \$10 to \$150.

PAA-POA Share Facilities

Pan American Airways and Pacific Overseas Airlines have filed for CAB approval of an agreement covering joint use of ground facilities and services at Midway, Wake, and Guam. PAA has made similar agreement with Australian National Airways for Canton Island, Honolulu, and San Francisco.

CAB Expected to Extend Terrain Indicator Deadline

CAB has under consideration the extension of the deadline date for installation of terrain proximity indicators from Feb. 15, 1948 to May 15, 1948 as a result of a request from the airlines for more time. The special radar equipment was ordered installed by CAB on recommendation of the President's Special Board of Inquiry into Air Safety. The order grew out of the crash into a mountain of a Capital Airlines plane last summer.

Board spokesmen said that the airlines found it almost impossible to comply with the Feb. 15 deadline date because of a variety of reasons. One was the fact that CAA originally required that the RT-7/APN-1 indicator had to be modified before installation. Since then CAA has advised the airlines that this type may be used without change. Modification orders had to be cancelled and new orders placed.

Location of the indicator also has given the airlines trouble. Original mockups involved nose installation of the RT-7/APN-1 by most of the carriers. Because this installation was found to be unsatisfactory in the approach flight condition, it was determined that this type of equipment would have to be installed in the tail.

A third reason for requesting delay was based on the heavy work load on maintenance shops. To have complied with the deadline would have made necessary the establishment of separate modification centers. The airlines state that if the deadline date is extended, the installations can be made when planes come in for periodic overhauls.

Segmented Circle Airport Marker System Now Effective

The segmented circle airport marker system developed by the Civil Aeronautics Administration as a visual aid to pilots using obscure or unfamiliar airports became effective Jan. 13 through adoption of an amendment of sub-section 60.108 of the Civil Air Regulations.

The system must be used on all existing Federal airports and on all airports hereafter built with Federal aid funds. Its adoption was protested vigorously by certain individuals and groups on the ground that it would impose an undue financial burden on the operators of small airports.

ARBA Airport Equipment Show

The 1948 convention and road show of the American Road Builders' Association, to be held July 16-24 at Soldiers Field, Chicago, will include demonstrations of machines used in airport construction.



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SAFETY SLANTS

American Airlines has unveiled the production model of its escape slide, which will enable the emergency evacuation of the passengers and crew of a four-engined plane in a couple of minutes. The slide—American does not want it called a “chute” because of the possibility of confusion with parachutes—was developed as a result of a suggestion made at a meeting a year and a half ago when plans for emergency evacuation of large transports were being made. The first model, made of duck, ripped after some 40 people had slid down it on its initial test. A second slide, of nylon, proved more durable and convinced the airline’s engineering and operations departments that the idea was practical. The final version is of fireproof fibre glass fabric. Plans call for providing the slides on all four-engined planes. Manufacture and installation of the slides will probably be done at the company’s maintenance base at Tulsa.

• • • • •
Airline industrial accident statistics indicate that falls are one of the most serious causes of employe injuries. Cuts, lacerations and bruises outnumber falls in frequency but on the average, falls result in more serious injuries. Blocked ears, comparatively rare among male flight crew members, are a still serious problem among stewardesses.

The lighting of loading areas at airports at night runs the entire gamut of poor to excellent. To secure adequate illumination, the lights must be raised high enough to be above the line of vision from the cockpit and cast their glow downward on the ramp. By keeping the lights high cast, shadows are shortened and the least possible loss of light occurs. The lights at Chicago’s passenger terminal are so low that a person standing in front of one can black out the entire area at a gate. Parking equipment along the fence, which is necessary in order to operate, has exactly the same effect.

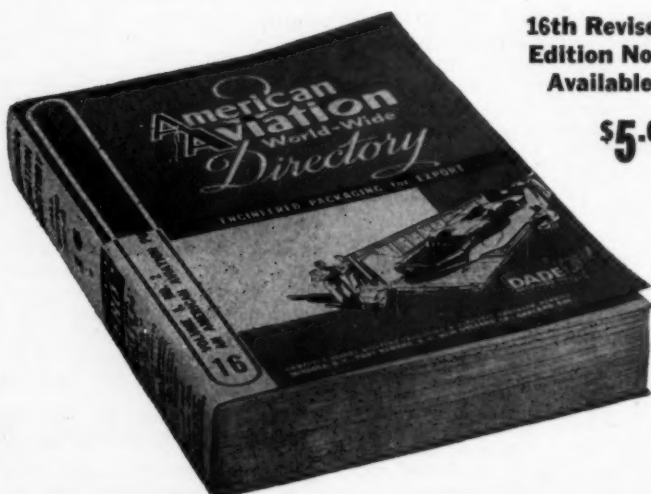
While raising lights will help the illumination of the gate side of aircraft on the ramp, lighting the field side is not so easy. Perhaps a few floodlight-generator units such as Pan American has tried out may be the answer. Do any of our readers have a better solution?

• • • • •
A record of a number of gasoline spills involving 25 gallons or more each at the Chicago Municipal Airport resulted in a conference being called by the Chicago Fire Department with the operators at the airport. The operators promised to take steps at once to correct conditions which were said to be largely due to equipment failure resulting from the use of Army surplus fuelers and lack of proper replacement parts. The meeting did bring out the fact that the CAR, while it requires a cabin attendant at the plane doorway during fueling, does not mention the need for keeping passenger loading steps in place! Chicago has now made this an airport rule. Looks like a good idea.

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California Eastern Takes Over Own Loading at Chicago

California Eastern Airways has moved its Chicago base to the former Air Transport Command freight dock at the Chicago Municipal Airport and company personnel have taken over loading and unloading of aircraft, previously a contract operation performed by an outside company. The change in operation is expected to cut the Chicago station stop from 90 minutes to 45 minutes, according to Andre de Saint-Phalle, new president of the cargo carrier.

In Los Angeles, California Eastern is moving into larger quarters in the former TWA hangar at Lockheed Air Terminal and in Newark the station office is being moved to Precinct Building, adjoining the main terminal. Saint-Phalle also said fueling had been taken over by company personnel at Denver and that when all the new procedures are in full operation elapsed time of east-bound flights would be reduced to 16 hours and westbounds to 17 hours, a time saving in excess of an hour.

Transocean Moves to Bradley Field

Transocean Air Lines is moving its Atlantic-European division operations and maintenance base from Teterboro, N. J. to Bradley Field, Windsor Locks, Conn., near Hartford. Company plans to do maintenance for other carriers at the Bradley Field base.

Durham Aircraft Opens New Instrument Overhaul Station

Durham Aircraft Service, Inc., has opened a new instrument overhaul station at 135-06 Northern Blvd., Flushing, N. Y., adjacent to La Guardia Field, supplementing its previously established accessory overhaul department at Flushing and doubling its overhaul facilities in the New York and Long Island areas. J. L. Marrotte is manager of the new shop.

Robert M. Durham, president, said the company did a record 1947 business of over \$2,000,000, which was half a million dollars above 1946 business.

ACEA Wins TWA Representation

The Airline Communication Employees Association, affiliate of the American Communications Association, CIO, has won the right to represent approximately 500 communication employees of TWA on collective bargaining matters with the company. The National Mediation Board, which conducted the election, announced the vote as follows: ACEA 203, Skyline Association of Radio Operators, Independent, 62, and Radio Officers Union 56.

Colonial Engine Contract to PAC

Colonial Airlines has awarded a contract to Pacific Airmotive Corp.'s Linden, N. J. branch for all engine overhaul work.

Landing Aids

Western at L.A.: Western Air Lines is first carrier authorized by CAA to use the Instrument Landing System at Los Angeles airport with its DC-4's. Authorized minimums are: 200 ft. ceiling with one-half mile visibility for both day and night take-offs, and 300 ft. ceiling with three-quarter mile visibility for day and night landings with straight-in approaches. WAL was also authorized to use ILS with DC-4's at Las Vegas with 800 ft. ceiling and two mile visibility for day and night take-offs, with 1000 ft. and one mile for straight-in landings.

Gander Minimums Cut: CAA has granted second reduction in minimums for landings at Gander, Newfoundland, using Pan American Airways' GCA installation which has been in operation one year. New minimums: 300 ft. ceiling and three-quarter mile visibility. Without GCA, requirements are 500 ft. and one mile. Commercial and military aircraft have set down at Gander 2,300 times with GCA during past year, most of them training and practice approaches.

ILS for Capital: Use of ILS by Capital Airlines has been approved by CAA, reducing landing limits by 25%.

Report on Slick Accident

CAB's official report on an accident involving a Slick Airways' C-46 which occurred at Denver, Colo., Feb. 14, 1947, cites as probable cause the "momentary loss of control or over-control by the pilot at a critically low altitude in the final stages of an ILS approach."

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40 New Mobile Power Units Give UAL Improved Ground Servicing For Planes

Improved ground servicing of all its four-engined planes will be accomplished by United Air Lines through 40 new ground power units now being placed in service.

Five of the units, for extra heavy duty, were designed by UAL to handle the heavy electric power requirements of the Boeing Stratocruisers slated to enter service this year. Each generates 1,000 amperes and resembles an over-sized jeep in appearance.

The thirty-five smaller units, each capable of producing 800 amperes, are being delivered to key stations to replace 200 ampere units now in use. Each weighs about 3,000 pounds and rolls on pneumatic tires. These and the larger units are manufactured by the Motor Generator Corp. of Troy, Ohio.

The heavy duty powerplants on wheels have eight-cylinder, 125 hp engines capable of towing UAL's largest planes. They are equipped with two powerful floodlights which can be detached from the vehicle and extended approximately 50 feet.

M. B. Crawford, equipment engineering superintendent, whose department designed these vehicles, said each of the seven Stratocruisers will require a maximum of 1800 amperes of power while on the ground. This will include operation of the air conditioning system, cooling compressors, automatic ventilation, all lights, heating and cooling units of the buffet, radios, and the starting of engines. This compares with about 600 amperes required for DC-6's and 85 amperes for DC-3's. For maximum requirements two of the heavy duty units will be connected.

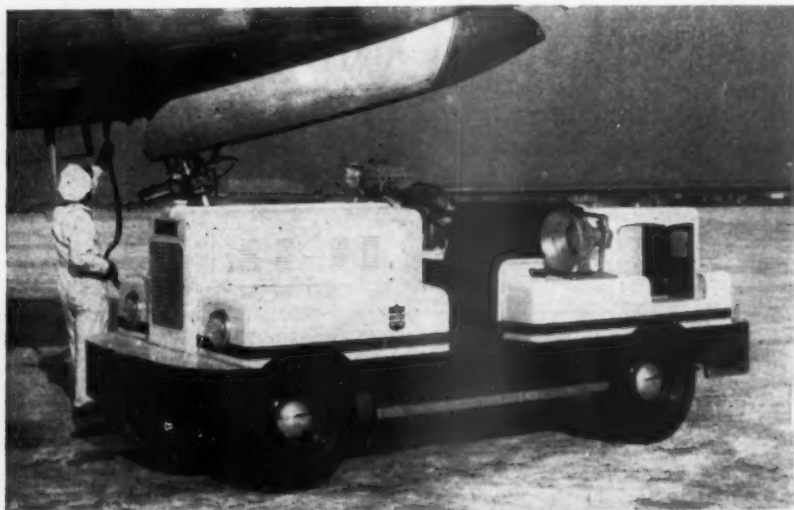


35 of these 800 ampere units are being delivered to key stations to provide electrical power.

Former TWA Pilot Buys 3 Connies for Cargo Line

A. W. Schwimmer, former TWA and wartime ATC pilot, has purchased three army C-69 Constellations from WAA to launch an air cargo line between the U. S. and Paris. He has organized his own 10-man crew to convert the planes, most of the personnel being former Lockheed employees. The conversion, which will take three months, will be done at Lockheed Air Terminal.

While Schwimmer Aviation Corp. is wholly an individual venture on Schwimmer's part, some outside financing may be attempted later. Base of operations will be at Melville, N. J.



This mobile power plant on wheels is capable of generating 1,000 amperes, can also be used in towing planes. Five are going into service.

AMERICAN AVIATION

Daily Plane Utilization International

	Sept.	Oct.
American		
4 eng. pass.	5:28	5:32
Cargo	5:26	5:56
Amer. O'Seas		
2 eng. pass.	1:39	:36
4 eng. pass.	7:39	2:13
C & S		
4 eng. pass.	6:31	7:47
Colonial		
4 eng. pass.	4:22	4:40
Eastern		
4 eng. pass.	8:40	8:52
National		
4 eng. pass.	8:22	9:23
Northwest		
2 eng. pass.	3:50	4:36
4 eng. pass.	7:17	7:50
Pan American		
Latin American		
2 eng. pass.	6:14	6:27
4 eng. pass.	9:49	9:49
Cargo	2:37	3:49
Atlantic		
2 eng. pass.	4:18	4:12
4 eng. pass.	8:05	7:29
Cargo	5:37	5:36
Pacific		
4 eng. pass.	9:30	9:03
Cargo	11:39	11:01
Alaska		
4 eng. pass.	6:33	7:32
TWA		
4 eng. pass.	8:01	6:43
Cargo	5:26	3:14
United		
4 eng. pass.	6:11	5:49

Feederlines

	Sept.	Oct.
Challenger		
(DC-3)	4:57	4:36
Empire		
(Boeing 247-D)	5:26	5:28
Florida		
(Beechcraft D-19-C)	4:36	4:55
Monarch		
(DC-3)	6:23	5:45
Pioneer		
(DC-3)	7:51	6:38
Southwest		
(DC-3)	6:10	5:10
Trans-Texas		
(DC-3) .....	....	9:15
West Coast		
(DC-3)	7:18	5:44

Product Literature

A folder describing a new high pressure control valve said to have application in the aircraft field is now available from the Shuler Valve Co., Inc., Mansfield, O. In addition to describing operations of the valve controls in detail, the booklet shows a cut-away section with all operating parts.

Airplane hangars take up six pages of a 16-page booklet on prefabricated sectional steel buildings issued by Erwin-Newman Co., P. O. Box 1308, Houston 1, Tex. The hangars described in the booklet range in size from a four-unit nested-tee hangar for private plane storage to Southern Airways' large hangar at Atlanta Municipal Airport. Also shown is an aviation parts and supply building used by a distributor at Houston Municipal Airport.

February 1, 1948

New Equipment

Power-Recorder

A new Power-Recorder developed by Square D Company's Kollsman Instrument Division will eliminate



guesswork in the measuring of engine usage and wear by recording the cumulative power-hour units turned out by an engine.

Power data are obtained in accordance with the engine power curves for all throttle and propeller pitch settings and altitudes, and for the aircraft operator's convenience the results are given in terms of equivalent hours at cruising power, thus registering 100 units per hour if the plane is flown at normal cruising power. The Power-Recorder prints the cumulative power units and the engine identification number in the manner of a timeclock so that the record can be filed for reference. The instrument promises to be useful to commercial airlines as a practical means for determining the time for servicing of engines.

New D.C. Amplifier

A new D. C. amplifier—Model No. 143AT2—for low level signals in telemetering, has been added to the line of Manning, Maxwell & Moore, Inc., Bridgeport, Conn. The unit in general is designed to be used in conjunction with other electronic equipment which is vibration and shock

isolated in accordance with standard practices. With limited changes, it can be used to drive an indicator, for control circuits, or as a high sensitivity relay.

Utilizing the Microsen Balance principle, the unit has a time constant of .02 seconds and is equipped with an adjustable gain setting of 160 to 300. Maximum input voltage is .2 volts and an output voltage of 0 to 5 volts. Power required is 5 watts. Size of the unit is 40 cubic inches, weight 24 oz.

All-Purpose Sweeper

An all-purpose power sweeper that keeps floors free of welding rod butts, nails, chips, paper, dirt, waste materials and sand is being introduced by the Wilshire Power Sweeper Co., of Pasadena, Calif. Useful either in an aircraft factory or an aircraft hangar or on parking aprons, the sweeper is simple to operate, will do the work of four or five hand sweepers and is claimed to reduce cleaning time and maintenance costs as much as 75%.

The Wilshire Power Sweeper has



a body of cast aluminum frame with a cover of 20-gauge sheet steel. Total weight is 130 pounds, and the sweep is 36 inches. Sweeper may be purchased with or without traction power drive. Address of the manufacturer is 3636 E. Foothill Blvd., Pasadena 8, Calif.

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Sizeable Increase in Revenues Expected for Airlines in '48

Airline managements who can keep operating expenses from soaring stand a better-than-fair chance of making money on their 1948 operations, according to a revenue study prepared by AMERICAN AVIATION.

For this analysis shows that, barring an unexpected slump in the national income level and an unforeseen drop in air passenger traffic, total revenues of the airlines will run far ahead of the 1947 dollar intake.

This will be particularly true with respect to passenger revenues, due to the two 10% fare increases put into effect by most of the carriers last year. For the 16 airlines covered in this study, revenue passenger miles flown during the first 11 months of 1947 totaled 5,588,941,000 and passenger revenues amounted to \$279,544,306. Should the same number of revenue passenger miles be flown during the first 11 months of this year at the current average passenger tariff of 5.6¢ per mile, they would yield passenger revenues totaling \$312,980,694. (See accompanying table.)

Thus, if the carriers can do no better than hold their own in passenger volume, they can expect gross revenues from that category of traffic to be \$33 million greater during the first 11 months of 1948 than during the same period last year. This increase is a little more than double the combined operating loss indicated for the same 16 airlines in 1947.

To some of the larger carriers, such as United, American, TWA and East-

ern, 11 months of operations this year at the average rate of 5.6¢ per passenger mile will mean several millions of dollars more than comparable traffic brought in last year at an average rate of 4.86¢ through March and an average rate of 5.1¢ from April through November.

The outlook as to revenues from other sources also appears encouraging. Air express and air freight are on an upward trend and should bring in much more gross revenue this year than last, although the reduced tariffs inaugurated in late 1947 will preclude a corresponding rise in net operating income from this source. Air mail should bring in no less revenue than last year, and may bring in considerably more.

The sharp decline in air mail loads during the demobilization period after the war apparently has reached bottom, and CAB analysts look for a gradual increase now, barring an economic recession. As to mail revenues, it is not possible to make a reasonable forecast, in view of the fact that all but two of the carriers have petitions for increased mail rates pending before the Civil Aeronautics Board. It is probably a reasonable assumption, however, that mail revenues will increase a little this year.

There is some possibility that Congress this year may approve a domestic air parcel post system, and in any event the soon-to-be-inaugurated international air parcel post should

result in some increased business for domestic carriers.

As to air express and air freight, both these categories of traffic showed great increases in 1947, particularly after fare reductions were instituted by both non-certificated and certificated carriers in late summer and early fall.

All flying of property domestically by air last year probably aggregated 150,000,000 ton-miles, and at least one top cargo official has estimated that the 1948 volume will exceed 250,000,000 ton-miles.

With minimum tariffs down to about 12.5¢ per ton-miles, the air carriers expect to make steady if unspectacular inroads this year into the vast volume of cargo now moving by rail express. Whether they can make money at these rates remains to be seen, but the possibilities of a profit will increase to some extent as more all-cargo planes are put into service and their average daily utilization moves upward. Here again, though, the unknown factor of rising expenses enters in.

Financial Briefs

Northeast Airlines has registered with SEC 83,333 shares of non-par convertible preferred stock to be offered to common stockholders at rate of one share for each six held. Proceeds will be used to pay all but \$400,000 of company's secured indebtedness to Atlas Corp., and its wholly-owned subsidiary, Salta Holding Corp., which aggregated \$1,812,304 last Oct. 1.

Air Associates, Inc. reported net loss of \$280,944 for year ended Sept. 30, after tax credit of \$272,161, compared with net profit for previous year of \$102,686 after \$398,984 tax credit. Approximately \$470,000 of \$553,105 operating loss last year was attributed to development and production of advanced type VHF radio transmitters under government contract on fixed price basis, and to necessity for relatively large inventory write-downs on several over-stocked lines of merchandise.

American Airlines directors have approved regular quarterly dividend of \$.875 per share on the 3½% cumulative preferred stock, payable Mar. 1 to holders of record Feb. 16.

General Motors Corp. is disposing of its interest in Bendix Aviation Corp. and has filed a registration statement with SEC covering 399,990 shares of common stock with par value of \$.50. Stock is being purchased by Morgan Stanley & Co. and will be offered later to the public. GM has held stock interest in Bendix continuously since 1929. Bendix has a total of 2,117,453 shares outstanding.

Beech Aircraft Corp. reported net profit of \$319,858 after taxes for quarter ended Dec. 31, equal to 80¢ a share on capital stock outstanding. Net sales were \$6,461,074.

Slick Airways proposes to institute a profit-sharing plan for employees this year.

Airlines	Rev. Pass. Miles Jan.-Nov., 1947	Pass. Revs. Jan.-Nov., 1947	Estimated Pass. Revs. at Current Fares*	In- crease Over 1947	Actual Net Profit-Loss Jan.-Nov., 1947
(000 omitted from all columns)					
American	1,294,046	\$ 63,591	\$ 72,466	\$ 8,875	\$ -2,001
Braniff	183,378	9,105	10,269	1,163	-1,005
Capital-PCA	268,628	13,073	15,043	1,970	-1,950
C & S	103,365	5,173	5,788	615	-705
Colonial	35,607	2,173	1,993	-179**	-645
Continental	54,560	2,770	3,055	284	152
Delta	184,884	9,163	10,353	1,190	-569
Eastern	795,725	41,864	44,560	2,696	2,540
Inland	25,765	1,361	1,442	81	4
MCA	75,987	4,136	4,255	118	196
National	158,568	8,125	8,879	754	174
Northeast	58,315	3,246	3,265	19	-1,026
Northwest	325,703	16,256	18,230	1,983	-1,040
TWA	748,197	37,944	41,899	3,954	-3,487
United	1,119,498	53,445	62,691	9,246	-4,217
Western	156,715	8,113	8,776	662	-408
TOTALS	5,588,941	\$279,544	\$312,980	\$33,436	\$-13,986

* These potential revenues are computed on basis of current industry average of 5.6¢ per passenger mile, assuming same mileage figure as in first 11 months of 1947.

** Colonial's rate on some route segments last year was above the average, accounting for the estimated revenue drop computed on basis of current industry average.

* * * *

Penny Postcard Promotion Pays Off for Capital Airlines

By ERIC BRAMLEY

You may have your doubts whether air transportation can be sold with penny postcards, but you'll have a hard time convincing Jim Austin that it can't be done.

Austin, Capital Airlines' director of traffic and sales, has been scattering postcards up and down the Capital system for the past six months, and the volume of convention and business travel they have produced is startling.

About \$750 was spent on the cards, and they returned at least \$88,844 worth of business. Or, put another way, the average cost of the 27,341 cards sent out was 2.7¢ apiece, and each 2.7¢ brought back \$3.25 worth of business.

Out after convention and business travel, Austin decided that it would be a good idea to try to find a fairly cheap but effective direct-mail selling method. It would be a good idea, that is, if a way could be devised to keep the cards out of secretaries' wastebaskets and be reasonably sure that they got in to the boss.

As far as convention business was concerned, the first step was to secure a complete list of all conventions to be held in cities on the Capital system. Inasmuch as it was impossible to cover all of them, the next step was to select those likely to produce the most business. Names of people expecting to attend from cities on Capital's routes were secured from the secretaries of the associations holding the conventions.

As important as many of these steps was getting a postcard that would catch the eye—that would be



Jim Austin

His Postcards Bring Sales

"cute" enough to land on the bosses' desks. This job was turned over to Joe Montgomery, Capital's art director, and he has been eminently successful. The eye-catcher he produced for the American Society of Zoologists' convention is reproduced on this page.

How could results be checked? The system was this: after cards were mailed out from Washington, district traffic managers received from the home office lists of people who had received the cards in their respective cities. In some cases they called the prospects, but in any event they were

told to watch their bookings at convention-time to see if the names turned up.

Business travel afforded another use for postcards. Automobile dealers traveling to and from company headquarters furnished a good source, for example. Names were easy to obtain—Austin has in his office a classified telephone directory for each city on the system.

The cards prepared by Montgomery for this business travel were naturals to attract attention. He took the Ford slogan, "There's a Ford in Your Future," and changed it to "There's a Flight in Your Future." RCA was translated into "Ride Capital Airlines" (see cut). Packard's slogan became "Ask the Man Who's Flown One." Some of the manufacturers liked the cards so much that they asked for extra copies.

Campaign Results

The results of the campaign for the last six months of 1947 were: 37 different cards were prepared, and 27,341 cards were mailed out. The cards produced 2,342 round trips and 1,662 one-way trips. Multiply these by Capital's average fare of \$14 and the total is \$88,844. In addition to this, 2,590 round trips and 978 one-ways were "promised" as a result of the cards, but Austin, although he knows that some of this business materialized, lays no claim to it because he has no definite proof.

So the cards will continue to be scattered up and down the Capital system this year, and some inter-line arrangements may even be worked out. Other airlines have been impressed with the idea and have asked Capital for details. Jim Austin's penny postcard may turn into a million-dollar idea.

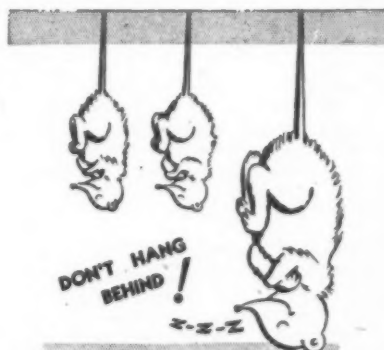


HIS MASTER'S VOICE

Capital Airlines offers RCA dealers and distributors fast, dependable service to RCA headquarters in New York.

KNOWN FOR YEARS AS "PCA"...
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Ride Capital Airlines
TO NEW YORK
Capital AIRLINES



fly to the
**American Society of
ZOOLOGISTS**
Meeting in Chicago-Dec. 29-31

Call your travel agent or

**Capital
AIRLINES**

GROUPED FOR YEARS AS "PCA"... ONE OF AMERICA'S PIONEER AIRLINES

Pan Am Flew 170 Daily Over Atlantic in '47

Pan American Airways flew an estimated 62,000 persons—about 170 per day—across the Atlantic during 1947, according to a company summary of the year's trans-Atlantic operations. This was more than double the 27,300 passengers flown across the ocean by PAA the year before.

The company's Constellation and DC-4's made a record total of 2,200 Atlantic crossings during the year, for an average of more than six a day. Total plane miles flown by PAA's Atlantic fleet was 12,000,000, twice as many as in 1946, and revenue passenger miles soared above 300,000,000.

Express totals reached 1,958,000 pounds and mail rose to 1,153,000 pounds. In addition to the trans-Atlantic passengers, Pan American flew 40,400 passengers to and from Bermuda during the year and handled 87,000 passengers on flights operating between La Guardia Field and San Juan and points in Latin America.

As to divisions of passenger traffic, westbound passengers across the Atlantic led eastbound passengers 39,700 to 22,300, and passengers from New York southward led those on northbound flights 46,000 to 41,000.

Hawaiian Airlines Files Its First Fare Increase

Hawaiian Airlines has filed with CAB the first proposed fare increase in its history. The new rates, scheduled to become effective Feb. 15, are necessary to meet an estimated 15% rise in operating costs.

Under a formula providing for a fixed base of \$4.00, plus 5c for each mile flown between any two points, the proposed new rates will show increases ranging from \$1.50 to \$2.00 on each inter-island flight. The fares will be: Honolulu to Hilo, \$15; Honolulu to Kauai, \$9.50; Honolulu to Maui, \$9.50; Honolulu to Molokai, \$7.00; Honolulu to Upolu Point, \$11.50; Honolulu to Lanai, \$7.50.

Baggage Allowance Increased

Effective Feb. 1, U. S. flag airlines operating in Latin America will raise their free baggage allowance from 55 lbs. (25 kilos) to 66 lbs. (30 kilos). Companies making the increase include Pan American Airways, American Airlines, and Chicago and Southern Air Lines.

Pioneer Offers Hotel Service

Pioneer Air Lines has made arrangements to provide passengers with hotel reservations in cities served by the company. The service is similar to that inaugurated by Braniff Airways for cities on its system last year.



New Food Service—A new meal service for baby airline passengers, featuring food served in especially-designed miniature place settings, will be inaugurated by Capital Airlines on Feb. 1, in recognition of the increasing number of small fry flying the airways. The place settings, including a tiny fork and spoon of fine quality silverplate and a colorful porcelain dish, were designed by experts of the Holmes & Edwards Division of the International Silver Co.

Slick Reports 21.9 Million Ton Miles Freight for '47

Slick Airways, reported its fleet of all-freight planes flew 21,937,071 revenue ton miles in 1947 for a gain of 95.9% over 11,198,594 flown during its 10 months of operations in 1946. Over-all average load factor for last year was 79%, uncommonly high for a freight carrier.

On the financial side, Slick broke into the black for the final third of 1947, according to Lewis J. Moorman, Jr., executive vice president. The company showed a profit of \$46,660 on September and October operations and expected to do fully as well in November and December, for which complete figures were not available.

Operating prior to last Aug. 1 as a contract carrier, Slick gained common carrier status on that date and stepped up its volume of business. After August, the company's ton miles never dropped below the 2,000,000-per-month mark, the totals being: September, 2,034,411; October 2,519,871; November 2,096,143, and December, 2,068,681. The October load factor was a record 91.2%.

The company flew 10,610,257 revenue ton miles of freight during the last five months of 1947, as compared to 8,712,140 in 1946 with virtually the same number of planes in operation. To Jan. 1, 1948, it had hauled a grand total of 34,135,665 ton miles of freight.

New Services

Domestic

Northwest Airlines will inaugurate service to Washington about Mar. 15 with four flights daily. Two will be DC-4 flights from Seattle, two 2-0-2 flights from the Twin Cities. The route is via Cleveland and Pittsburgh.

Chicago and Southern has inaugurated service between Hot Springs, Ark., and Memphis, with one flight daily in each direction. The morning southbound flight serves Little Rock as an intermediate point.

American Airlines began service to Richmond, Va., on Jan. 18. The city is served by one transcontinental DC-4 flight daily in each direction; two northbound DC-3 flights, and one daily DC-3 flight to Lynchburg, Roanoke and west.

Mid-Continent Airlines added Quincy, Ill., to its system on Jan. 22, linking the city with St. Louis to the south and with Minneapolis-St. Paul and other points to the north. MCA also was getting set to inaugurate service this week over its new Kansas City-St. Louis segment and to Waterloo, Ia.

International

SABENA Belgian Air Lines has inaugurated a direct service to Frankfurt, Germany, making connections at Brussels with its twice-weekly trans-Atlantic service. The company also has added a weekly trans-Atlantic cargo flight from New York to Brussels every Saturday.

British Overseas Airways last fortnight replaced its three Boeing 314A flying boats with Constellations on its three flights weekly between Baltimore and Bermuda and also added three weekly round-trip schedules between New York and Bermuda.

Austin Employees Win Awards In Braniff Sales Contest

Thirty employees of Braniff Airways' station at Austin will be given an extra week's vacation this year as a reward for having made Austin the winning city in the airline's system-wide 1947 sales contest. In addition to the vacation, a cash award will be made and distributed among all Austin personnel.

The sales campaign, open to Braniff stations in 30 cities, ran from August through December, with points being awarded proportionately for the sale of freight, express, travel gift certificates and air travel plans (charge account system). Austin, under leadership of J. P. Wheeler, traffic manager, and D. W. Carnes, operations manager, got nearly 7,000 points. Dallas ranked second, and Wichita Falls third.

Colonial Pays Cargo Commission

Colonial Airlines has announced that 5% commission will be paid all authorized agents for cargo shipped internationally over the company's lines, which include Bermuda, Ottawa, and Montreal.

UAL Reservations Shifted To Traffic and Sales

United Air Lines has transferred its reservations department from the passenger service department to traffic and sales, in preparation for a changeover to a new reservation system. The new system known as "Payload Control" is a sell-and-record method.

When the reservations method changeover, started Jan. 15, is completed, control of space will be re-

moved from local offices, whose primary function becomes that of sales.

Several administrative changes are involved. M. L. Perry has been named superintendent of reservations and ticket offices for the entire system, reporting to B. B. Gragg, director of traffic and sales. Under Perry is Fred Deakin as superintendent of ticket offices, and G. M. Morris as superintendent of reservations. All are based at Chicago. Larry Newman and Dawson Adams are superintendents of regional reservations service.

EAL Opens New Passenger Terminal at Newark

Eastern Air Lines has opened a new terminal at Newark for handling incoming passengers on all four-engine flights terminating at the Newark airport. The terminal is located at the northwest end of the field. Passengers departing from Newark on Eastern or arriving in twin-engine aircraft, will continue to use the regular passenger terminal in administration building.

U. S. Domestic Airline Traffic for November

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGERS MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REV. TRAFFIC TON-MILES	AVAILABLE TON-MILES	% AVAILABLE TON-MILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
All American	196,359	94,847,000	152,950,000	62.0%	493,547	544,275	1,350,793	11,345,658	20,635,763	54.9%	4,167,155	4,221,673	96.1%	
American	46,858	15,805,000	28,536,000	55.4%	72,825	73,251	64,141	3,357,876	51.4%	918,090	923,141	97.1%		
Branchiff	78,232	21,050,000	40,264,000*	52.3%	62,291	146,965	298,799	2,520,597	5,006,388	50.4%	1,228,669	1,316,019	91.7%	
Capital-PCA	5,600	336,000	749,000	45.1%	363	...	433	27,951	71,307	39.2%	31,207	31,582	98.8%	
C & S	21,317	8,609,000	15,862,000	54.3%	32,174	53,983	40,139	956,011	2,051,557	46.6%	566,262	603,366	93.6%	
Colonial	9,455	2,614,000	4,452,000	58.7%	6,469	4,168	1,887	275,712	429,264	64.2%	226,212	237,533	92.2%	
Continental	10,892	3,948,000	8,783,000	44.9%	10,573	5,995	15,284	410,108	930,040	44.1%	426,302	435,130	97.7%	
Delta	36,727	13,265,000	25,140,000	52.8%	58,840	75,103	115,205	1,522,977	3,296,594	46.2%	926,415	1,055,826	87.7%	
Eastern	150,457	71,320,000	135,036,000	52.0%	276,394	315,794	...	...	17,465,626	...	3,877,105	4,312,515	89.7%
Hawaiian	23,529	3,231,000	4,678,000	69.1%	2,614	10,821	48,352	336,575	565,471	59.3%	218,127	185,084	99.3%	
Inland	4,887	1,781,000	3,258,000	54.7%	6,824	3,825	2,683	184,006	335,534	54.0%	176,617	191,400	91.8%	
MCA	19,156	5,742,000	9,687,000	59.3%	17,068	13,289	15,598	595,651	1,007,463	59.1%	494,655	517,080	94.9%	
National	22,626	10,940,000	24,442,000	44.8%	26,581	69,205	48,339	1,254,643	3,610,445	35.0%	699,840	806,075	86.8%	
Northeast	26,457	4,883,000	8,916,000	54.0%	5,125	8,679	10,097	488,823	818,357	39.7%	293,946	297,055	92.6%	
Northwest	40,402	21,802,000	38,612,000	56.5%	167,803	136,904	102,259	2,511,284	4,823,297	52.1%	1,222,520	1,284,898	92.4%	
TWA	92,779	68,528,000	112,103,000	61.1%	724,356	514,894	554,259	8,387,089	13,776,630	60.9%	4,348,032	4,363,564	96.7%	
United	124,945	74,200,000	114,722,000	64.7%	588,276	553,554	1,228,117	9,483,204	16,656,748	56.9%	4,191,804	4,442,037	90.9%	
Western	22,034	8,352,000	17,286,000	48.3%	20,688	25,435	39,763	893,902	1,999,716	44.7%	516,648	529,664	95.2%	
TOTALS	932,712	431,255,000	745,482,000	57.0%	2,583,666	2,519,610	3,935,990	42,935,824	96,870,406	54.1%	24,667,283	25,905,862	92.0%	
* The available seat miles and passenger load factor are computed by the company on the basis of 50 available seats in each DC-4 aircraft. The actual available seating capacity of the fleet of DC-4 aircraft is an average of 56.1 seats.														
** Figures not yet available.														
MCA Final figures for Eastern Air Lines, Month of October, 1947:														
Freight ton-miles 481,531; Total ton-miles revenue traffic 8,553,633; % available ton-miles used 46.6%														

* The available seat miles and passenger load factor are computed on the basis of 50 available seats in each aircraft. The actual available seating capacity of the fleet of DC-4 aircraft is an average of 56.1 seats.
 ** Figures not yet available.
 NOTE: Final figures for Eastern Air Lines, Month of October, 1947: Freight ton-miles 441,831; Total ton-miles revenue traffic 8,553,633; % available ton-miles used 44.6%

U. S. International Airline Revenues-Expenses for October

AIRLINES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	U. S. MAIL REVENUES	FOREIGN MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT RM.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDEMNITY EXPENSES	NET OPERATING INCOME
American	\$ 344,074	\$ 269,392	\$ 3,517	\$ 3,631	\$ 50,650	\$ 6,578	\$ 6,578	\$ 344,579	\$ 177,999	\$ 166,580	\$ -904	
Amer. Overseas	1,702,585	427,371	1,133,699	12,168	58,155	.....	8,309	1,599,562	601,534	998,028	103,022	
C & S	76,474	35,775	39,045	.....	.....	835	797	78,736	32,709	46,029	-2,265	
Colonial	60,005	59,616	.....	.....	15	.....	375	111,213	38,045	73,168	-31,207	
Eastern	65,647	62,172	1,232	.....	.....	2,243	.....	76,894	34,386	42,508	-11,247	
National	50,650	34,100	360	.....	15,061	.....	1,129	69,050	25,854	43,196	-18,400	
Northwest	848,906	367,820	389,107	18,590	2,550	11,167	9,827	60,000	752,272	364,208	96,233	
Pan American	4,582,557	3,106,123	180,524	163,439	849,266	.....	143,732	103,458	5,176,129	2,211,938	2,964,191	-593,591
Latin Amer.	4,279,949	2,903,774	818,183	116,475	278,426	.....	51,165	90,578	3,974,008	2,412,853	1,561,155	305,940
Pacific	2,628,043	1,276,008	1,105,791	34,536	183,574	.....	16,167	-1,237	2,719,771	1,516,140	1,203,631	-91,728
Alaska	500,332	227,988	286,210	.....	18,988	.....	2,640	1,237	468,738	220,395	248,343	31,394
TWA	3,312,639	1,828,782	993,539	184,552	191,433	.....	88,001	30,080	2,935,499	1,190,316	1,745,183	377,140
United	286,876	269,494	6,228	.....	6,798	.....	4,310	.....	287,471	155,667	131,804	-955
TOTALS	18,756,317	10,868,415	4,920,435	532,811	1,604,266	64,895	330,030	244,116	18,593,924	8,982,044	9,611,880	144,392
Report for Quarter Ending September 30, 1947												
Colonial	88,467	88,073	.....	.....	107	.....	288	.....	201,622	73,444	128,378	-113,355
1) Includes maintenance and overhaul charges which are understated because original costs of conversion and first overhauls were capitalized; no major expenses on these items have been incurred to date.												
2) Company's estimate of amount which should be received in accordance with terms of Civil Aeronautics Act when permanent rates are established. Estimate exceeds proposed rate in effect by \$25,024 against which amount a reserve has been provided by current charges to non-operating income or expense.												
3) Represents company estimate which exceeds temporary rate in effect by \$504,085.												
4) Temporary rate in effect exceeds company estimate given here by \$40,613.												
5) Represents company estimate which exceeds temporary rate in effect by \$47,664.												
* Operations halted by pilot strike, Oct. 1-18.												

1) Includes maintenance and overhaul charges which are understated because original costs of conversion and first overhauls were capitalized; no major expenses on these items have been incurred to date.
 2) Company's estimate of amount which should be received in accordance with terms of Civil Aeronautics Act when permanent rates are established. Estimate exceeds proposed rate in effect by \$25,024 against which amount a reserve has been provided by current charges to non-operating income or expense.
 3) Represents company estimate which exceeds temporary rate in effect by \$604,085.
 4) Temporary rate in effect exceeds company estimate given here by \$40,613.
 5) Represents company estimate which exceeds temporary rate in effect by \$47,664.
 * Operations halted by pilot strike, Oct. 1-18.

U. S. Feederline Traffic for November

AIRLINES	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	MAIL TON-MILES	EXPRESS TON-MILES	FREIGHT TON-MILES	TOTAL TON-MILES	REV. TRAFFIC TON-MILES	AVAILABLE TON-MILES FLOWN	% AVAILABLE TON-MILES USED	REVENUE PLANE MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
Challenger	806	196,000	1,541,000	12.7%	1,114	834	2,436	24,113	193,683	12.5%	73,365	108,732	67.5%	
Empire	533	130,000	582,000	22.4%	861	340	...	12,039	47,254	25.5%	58,856	76,470	76.2%	
Florida	689	89,000	516,000	17.3%	325	144	...	7,925	56,913	13.9%	65,044	67,800	95.1%	
Monarch	1,434	295,000	1,892,000	15.6%	1,069	738	5,706	37,157	163,658	22.7%	105,269	146,586	71.9%	
Pioneer	5,686	1,432,000	4,890,000	29.3%	...	1,474	865	*	408,073	*	202,846	223,920	89.6%	
Southwest	6,337	1,203,000	3,791,000	35.5%	3,189	2,299	1,962	128,133	352,109	36.4%	167,591	176,460	93.7%	
Trans-Texas	424	85,000	1,440,000	5.9%	300	25	...	7,518	118,620	6.3%	68,592	85,920	79.8%	
West Coast	3,163	598,000	1,816,000	21.9%	736	455	...	37,219	184,827	20.1%	90,324	115,080	78.4%	
TOTALS	19,072	3,828,000	16,068,000	23.8%	7,994	6,309	10,969	234,104	1,525,137	22.7%	831,887	1,002,968	82.4%	
					Helicopter	Mail Service -- November, 1947								
Los Angeles	...	...	...	...	652	...	...	652	4,657	13.9%	12,301	12,938	96.6%	
	* Figures not yet available													

U. S. Feederline Revenues-Expenses for October

AIRES	TOTAL OPERATING REVENUES	PASSENGER REVENUES	MAIL REVENUES	EXPRESS REVENUES	FREIGHT REVENUES	EXCESS BAGGAGE REVENUES	NON-SCHEDULED TRANSPORT REV.	TOTAL OPERATING EXPENSES	AIRCRAFT OPERATING EXPENSES	GROUND & INDIRECT EXPENSES	NET OPERATING INCOME
Challenger	\$ 75,156	\$ 20,764	\$ 31,483	\$ 540	\$ 190	\$ 106	\$ 1,135	\$ 82,447	\$ 36,365	\$ 46,082	\$ -7,291
Empire	46,444	11,678	34,209	180	...	48	143	72,472	42,839	29,633	-26,028
Florida	40,959	5,555	35,025	111	...	34	...	45,318	22,517	22,801	-4,359
Monarch	277,141	26,841	247,869*	412	1,626	176	...	117,882	57,300	60,582	159,259
Pioneer	191,813	90,344	94,212	883	376	386	1,539	187,445	102,060	85,385	4,367
Southwest	127,884	64,544	59,303	1,200	979	228	1,768	204,181	98,591	105,590	-76,296
Trans-Texas**	38,291	3,951	34,237	...	...	16	...	35,554	14,816	20,738	2,737
West Coast	76,423	32,224	46,110	300	...	93	...	94,164	41,443	52,721	-15,741
TOTALS	876,111	255,901	602,528	3,626	3,131	1,087	4,585	839,463	415,931	423,532	36,648
Los Angeles***	9,836	...	9,836	...	...	...	...	14,895	8,442	6,453	-5,099

* Includes \$187,049 U.S. Retroactive Mail Pay — CAB Order October 20, 1947.
 ** Began Operations October 11, 1947.
 *** Began Operations October 1, 1947.
 NOTE: These figures are taken from monthly reports filed by the airlines with CAB. The data are tentative and subject to later change.

U. S. International Airline Traffic for October

AIRLINE	REVENUE PASSENGERS	REVENUE PASSENGER MILES	AVAILABLE SEAT MILES	PASSENGER LOAD FACTOR	U. S. MAIL TON-MAILES	FOREIGN MAIL TON-MAILES	EXPRESS TON-MAILES	FREIGHT TON-MAILES	TOTAL TON-MAILES	REV. TRAFFIC TON-MAILES	AVAILABLE TON-MAILES	% AVAILABLE TON-MAILES USED	REVENUE PLANE-MILES	SCHEDULED MILES	% SCHEDULED MILES COMPLETED
American	7,223	5,501,000	9,167,000	60.0%	7,816	1,225	• • • •	121,549	767,118	1,354,760	56.6%	249,260	231,674	100.0%	
Amer. Overseas	1,643	4,656,000	8,174,000	56.9%	45,752	3,659	92,276	• • • •	663,730	1,105,719	60.0%	220,395	235,646	91.3%	
C & S	827	566,000	1,336,000	42.4%	82	• • • •	• • • •	7,271	65,389	232,984	28.1%	41,100	42,470	96.9%	
Colonial	1,013	792,000	2,087,000	37.9%	487	147	47	• • • •	80,489	210,693	38.2%	54,361	55,369	98.2%	
Eastern	1,235	1,236,000	3,344,000	36.9%	2,737	• • • •	• • • •	• • • •	460,210	• • • •	60,060	62,062	96.9%		
National	1,683	529,000	1,995,000	33.2%	600	• • • •	14,243	• • • •	69,739	233,223	29.9%	34,680	35,836	96.9%	
Northwest	2,079	4,090,000	8,680,000	47.1%	70,066	8,128	5,423	50,966	564,070	1,219,023	46.3%	324,276	326,127	98.9%	
Pan American	46,915	43,730,000	92,544,000	47.3%	200,000	83,301	1,796,776	• • • •	6,649,064	12,994,579	51.2%	2,484,122	2,599,617	97.1%	
Latin Amer.	12,004	33,490,000	45,981,000	72.8%	212,462	48,451	512,482	• • • •	4,384,976	7,110,954	61.7%	1,272,456	1,174,144	90.4%	
Atlantic	6,138	18,216,000	28,092,000	64.8%	225,447	10,869	315,955	• • • •	2,559,061	4,340,492	54.4%	1,111,087	1,102,002	99.4%	
Pacific	2,737	3,031,000	8,243,000	36.8%	35,474	• • • •	35,988	• • • •	377,217	1,212,233	31.1%	191,098	201,589	91.0%	
Alaska															
TWA	6,453	20,814,000	27,175,000	76.6%	198,647	62,904	383,120	• • • •	3,017,324	4,185,678	72.1%	796,588	801,462	97.4%	
United	2,061	4,946,000	6,221,000	79.3%	13,994	• • • •	14,324	• • • •	535,324	682,658	78.4%	148,835	148,835	100.0%	
TOTALS	92,011	141,597,000	242,639,000	58.4%	1,013,564	218,684	3,170,634	179,786	19,533,501	35,343,406	55.3%	6,988,318	6,976,833	96.2%	
Final figures for Eastern Air Lines -- Month of September, 1947															
Freight ton-miles 10,219; Total ton-miles revenue traffic 402,409; % available ton-miles used 47.1%															
* Not reported. # Operations halted by pilot strike, Oct. 1-18.															
NOTE: Figures for American Airlines include that carrier's service to Mexico but not to Canada; for C & S to Havana; for Colonial to Bermuda; for Eastern to Puerto Rico; National to Havana; Northwest to Alaska, and United to Honolulu. Operations of U.S. carriers into Canada are included in domestic reports to CAB, in accordance with CAB filing procedures.															

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- P&W R-1830-92 Engine Parts, Accessories and Components

ALSO

- Douglas DC-4 Airplane Parts and Accessories
- P&W R-2000-13 Engine Parts, Accessories and Components (many of which are interchangeable with R-2000-7-9-11 Engines).

These inventories are available for inspection at our warehouses at Astoria, L. I., New York, Tulsa, Oklahoma and Fort Worth, Texas, and offered F.O.B. these points for domestic shipment at very attractive prices.

Prompt attention will be given to all requests for quotations directed to the attention of the Superintendent of Stores at the above address.

Classified Advertising

The rates for advertising in this section are as follows: "Help Wanted," "Positions Wanted," "Aircraft Wanted or For Sale," and all other classifications \$1.00 a line, minimum charge \$4.00. Estimate bold face heads 30 letters and spaces per line; light body face 40 per line; box numbers add two lines. Terms, cash with order. Forms close 20 days preceding publication date. Rates for display advertisements upon request. Address all correspondence to Classified Advertising Department, AMERICAN AVIATION PUBLICATIONS, 1317 F Street N. W., Washington 4, D. C.

HELP WANTED

WANTED—AIRCRAFT RADIO SALESMAN. Must be experienced in aircraft radio sales with broad contacts throughout the aircraft industry. Must be able to organize and set up merchandising program and preparation of literature. Must be an experienced Jr. Grade aircraft radio engineer. Excellent opportunity for future with a leading manufacturer. Location Middle West. Forward complete resume and salary requirements with salary history with first reply. All replies will be kept confidential. Apply Box No. 601, American Aviation, 1317 F St., N. W., Washington 4, D. C.

FOR SALE

For immediate sale 6 Lockheed Lodestars "B" series complete with airline equipment, radio, instruments, 10 passenger seats, lavatory and buffet. Fitted with cyclone 205A engines, hydromatic aircrews. All have current C of A's. Maximum permissible weight 9529 KGS. Weight empty average 5879 KGS. Aircraft situated middle east. Box No. 598, AMERICAN AVIATION, 1317 F St., N.W., Washington 4, D. C.

Airport Maintenance Booklet Available from Road Builders

For airport owners and operators concerned with problems of maintenance of concrete runways, taxiways and aprons, a 30-page illustrated technical bulletin on the subject is now available.

Prepared by W. R. Macatee, manager airport division, American Road Builders Association, the booklet entitled "Maintenance of Concrete Runways, Taxiways and Aprons," is available for 50c from ARBA, 1319 F Street NW, Washington 4, D. C.

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WINGS OF YESTERDAY

25 Years Ago

The bill to create a Bureau of Aeronautics in the Department of Commerce was introduced in the House of Representatives on Jan. 8, 1923 by Samuel H. Winslow of Mass.

The National Advisory Committee for Aeronautics submitted to the President a program for the Post Office Department to follow in connection with the Air Mail Service.

Two new projects for the development of Italian commercial aviation were revealed. The first called for the establishment of an airport at Genoa, and the second for an air route from Rome to Alexandria, Egypt.

10 Years Ago

(In AMERICAN AVIATION)

There were 2,299 airports and landing fields in the U. S. as of Jan. 1, 1938. Of these 720 were partially or fully lighted for night use.

A boost of over \$6,000,000 was recommended for government departments connected with civil aviation by President Roosevelt in his budget message for the fiscal year 1939.

LETTERS

"Most Striking Airport"

To the Editor:

Being one of the original subscribers to *American Aviation*, I still read it from cover to cover, and was interested in the story last issue on the Catalina Air Terminal which is described as "one of the most striking airports in the United States."

If that is "one of the most striking," I can say with a degree of certainty that the new Kanawha Airport at Charleston is "THE most striking" and being an enthusiastic "local yokel," I can't quite understand how it has failed to receive this recognition from the aviation writers over

the country; maybe we just haven't made enough noise about it.

I think I did send you one of the programs put out at the time of its dedication last November and saw an 8 or 10 line paragraph relative to it in a subsequent issue—Just "for the record," I enclose another.

As against a single strip 3200 ft. long, Kanawha has three strips—500 ft. wide—and from a mile to a mile and a quarter in length, plus the enclosed triangular area—sliced out of similarly rugged terrain; the tops of the highest hills were about 125 ft. above present grade and the deepest valley over 200 ft. below—in excess of 9 million cubic yards of dirt and rock excavation—put that in cubic feet and it sounds even more—roughly 250 million.

Ask the pilots of American, Eastern, Capital, and All American, who fly in and out of here daily, if they have ever seen anything quite like it.

Of course, this Catalina strip is unique in having been built by private enterprise; Kanawha is equally unique among municipal airports, in that the local County government has supplied well over 50% of the cost to date—rather different from the usual ratio on Federal aid airports of the past 10 years.

And the surprising thing is that the airlines are discovering there is some real business down here in the hill country. I have seen several days when American, on their Chicago-Washington-New York schedule put off 25-30 passengers at Charleston, and took on an equal number.

It really is worth "telling the world about."

DAVID M. GILTINAN

President, Eskew, Smith & Cannon
Charleston, W. Va.

Timely Editorial

To the Editor:

I have just had the opportunity of reading your editorial entitled "Let's Go to Work" appearing in the Jan. 1 issue of *American Aviation* magazine and want to congratulate you upon the thoughts brought out by you as well as the timeliness of the article.

For the past few months we have been stressing in our staff meetings a number of the thoughts set out by you but I think perhaps a more forceful impression can be made on the minds of airline personnel when this kind of thinking is put forth by one who is not directly connected with an airline.

In fact I was so impressed that I am having copies made of your editorial and distributed to all personnel of this company with the request that it be read thoughtfully by each person.

J. W. MILLER, President,
Mid-Continent Airlines, Inc.

To the Editor:

I want you to know that your recent editorial, "Let's Go to Work," in my opinion represents some of the soundest advice that

I have seen in the editorial pages of *American Aviation*.

In this editorial, you have set forth the fundamentals that at one time were the major contributing factors to the success of the airline industry. In raising the banner again of selling ourselves to the public, you have sounded the keynote of a campaign that can spell success for the future of this business.

Public confidence must be regained and I hope that everyone connected with the industry will take to heart the sound advice in "Let's Go to Work."

HAYES DEVER,

Director, Public Relations
Capital Airlines

'Change of Command'

To the Editor:

I am sure that Gilbert Perier will wonder what happened to his election if he sees the little item on page 11 of your Jan. 15 number, captioned "Multilateral Delay." But the quotation from Hildred is a very good capsule summary of what went on at Geneva.

That was a good editorial on "Change of Command"—and the best analysis I have seen of l'affaire Landis.

S. RALPH COHEN,

Public Relations Officer,

International Air Transport Association.

(Editor's Note: The kind comment on the "Change of Command" editorial is appreciated. However, no "change of command" was intended with regard to Gilbert Perier. Our slip notwithstanding, Mr. Perier is president of the International Air Transport Association, and Sir William Hildred is director general.)

BOOKS

FLIGHT ENGINEERING AND CRUISE CONTROL, by Harris G. Moe. John Wiley & Sons, Inc., 440 Fourth Ave., New York. 209 pp. \$4.00.

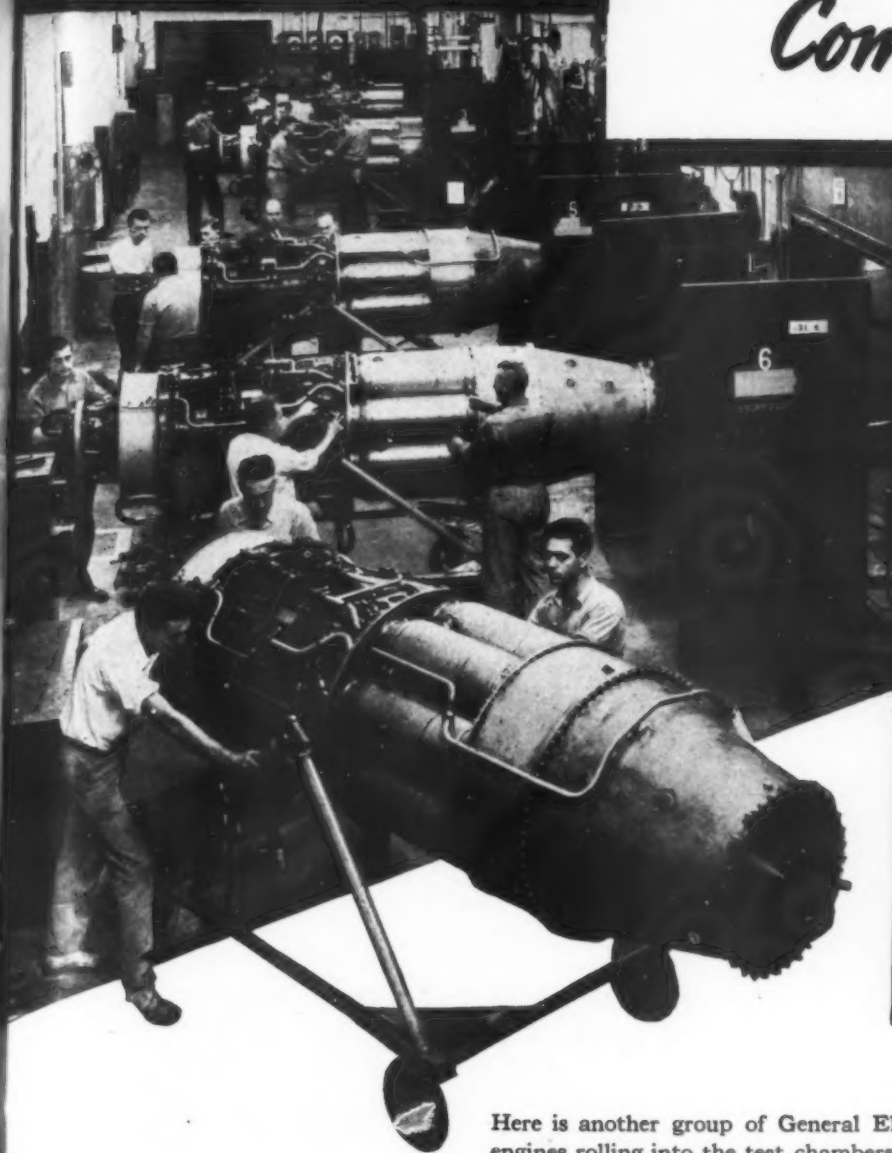
This volume by a former division engineer of Consolidated Vultee Aircraft Corp. treats subjects basically technical in nature in such a manner that the reader need not be highly trained technically to understand them. Subjects covered are those pertaining to actual airplane and engine operation, as shown by sample chapter headings which include: altimeters and types of altitude, air speed, propellers and propeller efficiency, basic cruising techniques, flight control and planning, weight and balance and their effects. Giving the book a forward look is a discussion of air compressibility and jet propulsion—principles and implications for the future. It should prove useful to commercial, military, and private pilots alike, flight engineers, navigators, aerodynamicists, and students of aeronautics.

'Most Striking Airport'

Called "THE most striking airport" in the U. S. (see letter above) is the Kanawha airport at Charleston, W. Va. Airport's nearness to city is one of its outstanding features; it is only 10 minutes easy drive from business center (upper left). Aerial view shows Kanawha River at far left, Elk River at top.

SHAKE-DOWN

Coming up



**PRECISION PRODUCTS
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Here is another group of General Electric's torpedo-shaped TG-180 jet engines rolling into the test chambers at our aircraft gas turbine factory in Lynn, Mass. In its test chamber, every jet engine gets a full-power "shake-down" run. Then, like any aircraft engine, it is dismantled, inspected, reassembled, and given a final test before shipment.

All types of electric aircraft equipment, in addition to jet engines, are built by General Electric. Part of G.E.'s line of electric aircraft equipment includes: generators—complete power systems, turbosuperchargers, explosion-proof motors and control, gas turbines, flight recorders, instruments, ignition systems, specialized electrical equipment. When you need a complete power or ignition system, or a single instrument, or when a specialized application requires individual attention, we'll be glad to arrange to supply it for you. *Apparatus Department, General Electric Company, Schenectady, New York.*

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